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„Transfer and Optionality: Verb Second and
Inversion in Advanced L2 English“

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English Summary

Against the background of the ongoing debate about access to UG and the possibility of parameter resetting in second language acquisition, the research presented here studies the transfer of verb second from L1 German into L2 English by instructed learners at advanced stages of acquisition. The theoretical positions of Full Transfer/Full Access and No Access are contrasted. In addition, given the nature of word order variability in English, where inversion and surface V2 orders are constrained by lexical and discourse factors, the Interface Hypothesis is tested.

The empirical study falls into two main parts: (1) A contrastive interlanguage analysis of the L1 German, Dutch, Bulgarian, Finnish and French subcorpora of the International Corpus of Learner English and a tailor-made L1 German learner corpus; (2) A grammaticality judgement task administered to advanced L1 (Austrian) German students of English and native English controls. For the corpus study, V2 word order diagnostics and target English word order variation patterns are identified and analysed between the subcorpora to arrive at a characterisation of the influence of L1 German on the acquisition of English word order. The grammaticality judgement task tests the acceptability of a range of non-target verb second word order patterns compared to target English syntax.

While the results of the corpus study indicate a residual tendency on the part of the L1 German (and Dutch) speakers to transfer V2 into English, this is restricted to the movement of auxiliary verbs and inversion of copula *be*. Thematic verb placement in questions and relative to negation is consistently target-like. The grammaticality judgements show a consistently target-like preference for English word order patterns over V2 patterns apart from in one case. Inversion of the arguments around verbs with copula-like lexical semantics is judged significantly more acceptable than the learners.

The results are analysed as lending support to a No Parameter Resetting approach to L2A. The learners, as a group, do not show consistent resetting of the surface consequences of the V2 parameter. So while the lack of movement of thematic verbs to the left of the clause is consistently target-like, inversion around equative verbs shows the influence of surface German patterns without implicating an underlying V2 parameter. This is analysed in a constructionist approach, where L2A proceeds on the basis of surface generalisations rather than implicit parameter resetting. In line with the Interface Hypothesis, the constructions which pose most difficulty are those which involve the interfaces of syntax with discourse pragmatics.

Deutsche Zusammenfassung

Diese Dissertation untersucht die Syntax in fortgeschrittener englischer Lernautsprache. Der Einfluss der Verbzweitstellung (V2) des Deutschen auf die Zielsprache Englisch bei Lernern deren Erstsprache Deutsch ist, wird unter Berücksichtigung konkurrierender Theorien der Parameterfixierung und der Optionalität im Zweitspracherwerb analysiert. Die der Analyse zugrundeliegenden theoretischen Ansätze *Full Transfer/Full Access*, *No Parameter Resetting*, die *Interface Hypothese* und *Multiple Parameter Setting* werden auf Basis von kontrastiven Lernerkorpusuntersuchungen und Grammatikalitätsurteilsaufgaben getestet.

Während die Ergebnisse der Korpusuntersuchung eine Resttendenz bei L1-Deutsch (und Niederländisch) Sprechern zum Transfer von V2 ins Englische zeigen, ist dies doch auf die Umstellung von Auxiliärverben und der Kopula beschränkt. Die Position des thematischen Verbs in Fragen und bei Verneinungen ist durchgehend wie in der Zielsprache. Grammatikalitätsurteile zeigen eine durchgehende Präferenz der Lernenden für englische Wortstellungsmuster gegenüber V2-Mustern, abgesehen von einem Fall: die Inversion der Argumente um Verben die in ihren lexikalisch-semantischen Eigenschaften Kopularverben ähneln. Diese wird von den LernerInnen signifikant häufiger als von Muttersprachlern als zulässig beurteilt.

Die Ergebnisse untermauern den Ansatz des *No Parameter Resetting* im Zweitspracherwerb. Die LernerInnen zeigen keine konsistente Neusetzung der Auswirkungen des Vwebzwietparameters auf die Oberflächenstruktur. Während der Mangel von Bewegung des thematischen Verbs in der Lernautsprache durchgehend wie in der Zielsprache ist, zeigt die Inversion um die "equativen" Verben den Einfluß der Oberflächenstruktur des Deutschen ohne Einbeziehung eines zugrunde liegenden V2 Parameters. Dies wird in einem konstruktivistischen Ansatz ausgewertet, wonach Zweitspracherwerb auf der Basis von Oberflächengeneralisationen anstatt von impliziter Parametersetzung stattfindet. In Übereinstimmung mit der Interface Hypothese bereiten die Konstruktionen den Lernenden die meisten Schwierigkeiten, welche sich an der Schnittstelle von Syntax und Diskurspragmatik befinden.

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Introduction

Evidence has shown that second language learners transfer the V2 parameter into target languages which do not instantiate V2, and this may continue as a persistent residual option even at relatively advanced stages of acquisition (Hulk 1991, Robertson & Sorace 1999, Westergaard 2003). This sort of evidence has played an important role in the debate surrounding the extent to which parameter resetting is available as a mechanism in L2A, and thus the debate about the extent to which Universal Grammar (UG) continues to be available in adult second language acquisition (SLA) or whether this is subject to a critical period beyond which learners of a second language must resort to qualitatively different learning mechanisms and cognitive strategies to acquire L2 parametric options.

The present thesis seeks to address the question of whether or not advanced L1 German learners of L2 English have reset the V2 parameter. The V2 and verb movement parameters in German give rise to a range of word order distinctions in comparison to English. The aim is to determine whether all of the surface word order distinctions are reset to target English settings by advanced stages of acquisition (i.e. the final stages of university courses). The linguistic factors that constrain continued transfer are studied in production and grammaticality judgement data. In addition to examining XP-fronting and topicalisation and subject-verb inversion, which have been the focus of previous studies of the transfer of V2, the full range of constructions which are implicated in the V2 parameter are studied, i.e. verb placement with respect to negation and adverbs, and adverb placement relative to thematic verbs. In addition, the extent to which word order variation and the residual V2 system instantiated in English has been acquired at advanced stages by tutored learners of English is investigated. To this end, the use of the target surface V2 structures such SAI in interrogatives, stylistic inversion and negative inversion is compared across the production of different L1 groups. The theoretical background to this is provided by models which assume a more fine-grained analysis of cross-linguistic parametric variation or multiple grammatical representations.

The Problem: Transfer and Optionality

The main problems with which second language acquisition studies have traditionally grappled are transfer and optionality. The fortunes of first language transfer in SLA have ebbed and flowed over the course of the last 50 or so years of research (since Lado's 1957 Contrastive Analysis proposed L1 influence as the only mechanism in second language learning). Dechert & Raupach (1989: ix, quoted in Gilquin 2008: 4) have claimed that "[in] spite of three decades of intensive research [...] there is still no generally accepted agreement of what transfer in language acquisition actually is." The intervening two decades have brought more intensive research, especially from SLA research in the generative tradition. This has proposed many answers but also raised new questions and overall there is not necessarily a substantially clearer picture of the role of transfer in L2 acquisition. Bohnacker (2006: 404) could still assert:

"Few acquisition theorists would dispute that the first language (L1) plays a role in second language acquisition, but many disagree about its extent and whether it equally affects all second language (L2) modules."

The central questions that have exercised SLA theorists are the extent to which the L1 grammar and its parametric options transfer entirely to form the L2 grammar at the initial state of L2A (see Ch. 2). Furthermore, a fundamental challenge for SLA research is the existence of optionality of continued L1 influence even at more advanced stages of L2A when it would seem that the target option has been acquired. There are conceptual and theoretical problems posed by the fact that even advanced learners seem to continue optionally to transfer features of their L1 into the L2. In a Principles and Parameters approach to SLA this is problematic as it would seem that advanced learners have acquired the parametric settings of the L2 and so it is not straightforward to account for the continued transfer of an L1 parametric setting. These problems are inherent to a P&P conceptualisation of global word order parameters based on binary setting or switching. A more refined parametric architecture is explored in Chapter 4. The parameter resetting phenomenon in SLA has been particularly well studied in the generative tradition on the basis of the verb movement (e.g. White 1991, 1992 *inter alia*) and the null subject parameters (Sorace 2005, 2006a). So for example, an L1 French

learner of L2 English may produce both (1a) and (1b), where the latter would apparently show the influence of the L1 verb movement parameter.

(1) Mary often reads linguistics articles.

Mary reads often linguistics articles.

This sort of phenomenon is the most obvious distinction between first language acquisition and second language acquisition as the end result of each process may be different. The course of (unimpaired) FLA leads to full mastery of a native language by a child exposed to natural target language input. By contrast, even the stage of ultimate attainment by adult learners of a second language is not necessarily full native-like mastery of the target language. Continued non-native like properties remain alongside the target properties as in (1). These facts have often been taken to be an indication of a critical period for language acquisition (see Lenneberg 1967 for critical period, although he does not himself consider L2 evidence). According to this view, there should then be a short window of opportunity in childhood during which we can acquire effortlessly and completely the full grammar of the ambient language to which we are exposed. We may perhaps never fully acquire native competence in a second language that we start to learn later (i.e. after this critical period), despite having reached cognitive maturity, despite having already mastered a first language, and despite even conscious effort and formal tuition.

One must of course be careful to avoid falling into the “comparative fallacy” trap (Bley-Vroman 1983). The assumption is that one cannot analyse learner language as a deviant form of some idealised target form. This is in effect a restatement of the Interlanguage Hypothesis (Selinker 1972), which states that learner language or an ‘interlanguage’ is a consistent grammatical system in its own right, which reflects a given stage of grammatical development of a learner. Thus interlanguage should also be studied as a system in its own right, which instantiates consistent parametric options of natural language, although the parameters may be neither those of the L1 nor the TL. A distinction must be made here between the analytic approach criticised by Bley-Vroman and the methodological technique of comparing learner to native language in order to identify instances of transfer. This second approach is taken in the present thesis.

Organisation of the Thesis

The thesis is split into two main parts; the first provides an overview of the relevant parametric distinctions between German and English and the task facing an L1 German speaker in acquiring English word order. In addition, theories of transfer and optionality in L2A are reviewed. Chapter 2 presents hypotheses pertaining to transfer and optionality of parametric options at the initial state and the possibility of parameter resetting in L2A. Chapter 3 deals with the nature of transfer and optionality at the end-state or advanced levels of L2A and reviews the Interface Hypothesis as a model which accounts for continued L1 influence which is confined to the interfaces of syntax with other cognitive domains. Chapter 4 looks at theories of microparametric variation or competing grammatical representations on the basis of residual V2 properties of English and makes predictions for how these may be acquired.

The second part of the thesis presents the empirical studies of word order in learner English. Chapters 6 and 7 present the methodology and background to the empirical studies, the results of which are presented in Chapters 8 and 9. Chapter 10 puts the findings in perspective and reviews the results against the background of the theoretical models reviewed in Chapters 1-5.

The Findings

On the basis of the results from the corpus study and grammaticality judgement studies, I argue that the data is most compatible with the assumption that underlying parameters are not reset on the basis of implicit language learning during the course of L2A. The different surface constructions linked to the verb movement and V2 parameters are not all reset consistently. Rather, it seems that learners start out with the L1 grammar and learning proceeds on the basis of surface generalisations of L2 constructions. Where continued transfer is in evidence, this appears to be transferred as entire constructions rather than parametric rules and they serve to express information structural properties from the L1. This suggests that the main tenets of the Interface Hypothesis are correct as they predict that information structure and discourse-pragmatics will prove more difficult to master than basic syntax; however, I suggest that interface constructions are transferred rather than parameters.

1 Word Order in English and German

In this chapter, the principles of basic word order in German and English are outlined. The nature of German V2 and verb movement syntax is presented first and contrasted with the basic English V3, verb in situ grammar. The following sections then present factors which regulate word order variation and residual V2 properties in English. This concentrates to a large extent on stylistic and locative inversion structures to set the methodological foundation for the studies presented in subsequent chapters.

Thematic verb movement and V2 in German give rise to a range of distinctions in terms of linear surface order between different types of German and English clauses. Evidence for movement and V2 can be found in questions and in declarative clauses which contain sentence adverbs, sentential negation, or non-subject initial constituents. These structures may be used as diagnostics for transfer in the learner language to be studied.

1.1 On V2 Syntax

Verb movement in general and the V2 phenomenon in the Germanic languages¹ in particular have been the subject of intense study in formal and theoretical syntax for some time (cf. the classic analyses in den Besten 1983, Thiersch 1978, see also the collection of papers in Haider & Prinzhorn 1986). In spite of the attention paid to the phenomenon, no general consensus has been reached on the correct formal analysis of V2 or, for that matter, of head movement more generally. Manifold explanations for V2 have been forwarded in the literature. The classic analyses of German word order involve the verb moving from an underlying head-final VP to C. The motivations for this movement might include the establishment of a necessary spec-head configuration (Zwart 1993). It has also been suggested that tense or finiteness features located in C in the Germanic languages necessitate verb raising (Platzack 1986a, b; Platzack & Holmberg 1989). Asymmetric analyses, however, posit that the verb does not always

¹ In what follows, the bulk of what is discussed could be applied just as well to Dutch, for which an identical syntactic structure and movement operations to German are generally posited. This will be important for the results of the corpus study, where evidence from Dutch speaking learners of English is used as corroboration for the German L1 corpora.

move to C; in subject initial clauses, the clause is assumed to be an IP with the verb in I (cf. Travis 1991; Zwart 1991, but see also Schwartz & Vikner 1996 for a critique of these analyses). Other analyses have the target of movement as one of various functional projections in a Split-CP architecture (Westergaard & Vangsnes 2005; Frey 2005b, 2006). In fact proposals in the Minimalist Program have sought to remove verb movement from syntax altogether and confine it to phonology (cf. Chomsky 1999) or account for it using a syntactic mechanism which does not involve head movement (cf. Mahajan 2001; Müller 2004). For an overview of various proposals within the GB framework see Vikner (1995). For recent technical analyses and theoretical developments in the analysis of verb second, see also Meinunger (2006), Faneslow (2004), Zwart (2001).

Given the wealth of possible analyses for V2, it would be prudent at this point to highlight a general caveat suggested by Bohnacker (2006: 451) for language acquisition studies: “In syntactic acquisition research it is generally advisable to keep the – often ephemeral – formal syntactic apparatus to a minimum.” Schwartz & Sprouse (2000: 158) similarly warn that “the extent to which any type of L2 acquisition research is tied to the particular technicalities of specific linguistic analyses is the extent to which it risks being undercut by a better theory around the corner.” With this in mind, in the discussion to follow I will eschew arcane syntactic analyses of V2 and concentrate in the main on linear order. Where I do refer to the syntactic structures and movement involved in V2, I will favour the traditional approach of movement of the verb via I to C accompanied by topicalisation of some argumental or adverbial constituent to Spec-CP. This can be translated into whatever specific syntactic technology the reader might prefer. The only theoretical distinction of direct relevance to the parameter setting model posited in the later chapters is that between analyses which assume V2 is the result of tense or finiteness features on C and the alternative analyses which posit discourse-relevant or illocutionary force features on C.

1.2 Word Order in German

German is standardly assumed to have underlying SOV word order, which is masked in main clauses in the surface string by the V2 constraint. OV can be identified in embedded clauses introduced by a complementizer, where verbal elements occur

clause-finally, and in main clauses by the clause-final placement of non-finite verbs and separable verbal prefixes. This need not be of major concern for present purposes.²

1.2.1 Verb Second and Inversion

In a German main declarative or interrogative clause, the finite verb must occur in second position. This is usually identified as the left sentence bracket (*Satzklammer*) and gives rise to a unique ‘prefield’ position, which can be occupied by only one constituent. There are few constraints on constituents the type of constituent which may be fronted to the prefield position (see however Frey 2005b, 2006 on different interpretations of fronted constituents).

Consider the sentences in (1.1).

- (1.1) a. Ich kenne seit Jahren die Babsi.
b. Die Babsi kenne ich seit Jahren.
c. Seit Jahren kenne ich die Babsi.
d. Nie lernte ich die Babsi kennen.
e. *Seit Jahren ich kenne die Babsi.

Classical generative analyses (e.g. den Besten 1983) and much subsequent work assume that the finite verb in main clauses has moved from its original VP-final position to COMP, while some other constituent is topicalised and appears in Spec-CP as the initial constituent in the clause. The fronting of *any* non-subject constituent will therefore give rise to overt subject-verb inversion in the surface string.³

² The Full Transfer Hypothesis (Schwartz & Sprouse 1996), which will be discussed in Chapter 2, predicts that the L1 in its entirety forms the initial representation of an L2. It would thus be expected that German-speaking learners of L2 English will start out assuming an OV grammar for English. It is assumed that the English input provides the requisite evidence for this to be restructured very quickly. There are no suggestions in the literature that OV persists in L2 English past the initial state.

³ Alternative analyses of V2 propose that the position of the finite verb is different depending on whether the initial constituent is the subject or a non-subject (see for example Travis 1991 for such an asymmetric analysis). I do not discuss such an analysis here but will refer to how it has been used in SLA along with associated empirical problems in Chapters 5 and 10. Schwartz & Vikner (1996) outline a range of empirical shortcomings with an asymmetric analysis based on a range of V2 Germanic languages.

Main clause *wh*-questions in German likewise involve movement of a finite verbal element to second position accompanied by movement of a *wh*-operator to the prefield, and direct questions involve head movement to C but without any overt movement to the prefield, which hosts a null operator, as outlined in (1.2).

- (1.2) a. [_{CP} Op [_C Kennst]] du die Babsi?
b. [_{CP} Wen [_C lernstest]] du bei Babsis Geburtstagsfest kennen?

A Minimalist update of the classic analyses is outlined by Adger (2003: 329-330). On this view, matrix C values the uninterpretable [Decl] clause-type feature on T as strong and T, to which the finite verb has moved, raises to C in declaratives giving rise to V2. C likewise bears a strong topic feature which must be checked by movement of some constituent which is interpreted as the sentence topic. Any constituent can bear a [top] feature in German and be moved to sentence initial position. The sentence topic is by default the subject when there is no other information structural motivation to front a different sentence constituent.

1.2.2 Verb Movement, Adverb Placement and Negation

In line with much previous work, I take adverb placement to be a diagnostic for verb movement (see Svenonius 2002 for the status of adverb placement as a diagnostic for movement and clause structure). The approach taken here follows the precedent set in SLA research on V-to-I movement by assuming that adverbs are adjoined to VP and that linear orders where an adverb intervenes between a verb and its object in L2 English are indicative of the verb having moved out of VP past the adjoined adverb (see White 1990/1991, 1992, *inter alia*).⁴

⁴ The status of VAO order as a reliable diagnostic for V2 will be called into question in later chapters.

This is however, perhaps a rather simplified picture. On the complexity of adverbial syntax, Ernst (2002: 1) notes:

“Nobody seems to know exactly what to do with adverbs. The literature of the last 30 years in formal syntax and semantics is peppered with analyses of the distribution or interpretation (or both) of small classes of adverbs but has few attempts at an overall theory ... and almost everyone who has looked at the overall landscape has felt obliged to observe what a swamp it is.”

In both German and English there is an apparently free distribution of adverbs, which is however subject to constraints on the semantic type of adverb, as not all classes of adverb are felicitous in all positions (see for example Frey 2003 for a proposal of adverb classes in English and German). In addition, scrambling of argumental constituents in German may give rise to different permutations of arguments and adverbials in the Mittelfeld depending on various semantic and pragmatic factors. Indeed, it has been argued that VAO order in L1 Dutch-L2 English interlanguage is the result of the transfer of scrambling, which in turn is related to the transfer of the OV parameter (Neeleman & Weerman 1997). To avoid further complications, it will be assumed here that it is V2 which is the source of linear VAO and V-Neg-Obj orders in L1 German-L2 English interlanguage, the distinctions are illustrated in (1.3). Due to V2, finite thematic verbs in German must occur to the left of all sentence-medial constituents, including adverbs and negation.

- (1.3) a. I often read novels.
a'. *I read often novels.
b. I do not read in the bath.
b'. *I read not in the bath.
c. Ich lese oft Romane.
c'. *Ich oft lese Romane.
d. Ich lese nicht in der Badewanne.
d'. *Ich nicht lese in der Badewanne.

It is assumed that the representation in (1.4) underlies these sorts of non-target word orders where they occur.

(1.4) [CP I_k C° read_i [IP I° t_i [VP often/not [VP t_k v° t_i]]]]⁵

1.3 English Word Order

Unmarked declarative clauses in English have canonical V3, SVO order (XSVO and SAVO). There are however a number of instances where English departs from these canonical orders. Especially interesting for present purposes are those instances where V2 seems to be in evidence in a number of specific structural contexts. These can be seen as leftovers of the more uniform German-like V2 system at earlier stages in the history of English (cf. Rizzi's "residual V2" 1990, 1996; Westergaard's "Mixed V2" 2007a). The relevant point is L1 German learners of English must not reset globally and consistently from V2 to V3, but rather must put in place a more differentiated surface V2 pattern.

1.3.1 Verb Second: The Status of *Be* and *Have* and Auxiliaries

Be and *have* in English are an exception to the rule that thematic verbs do not raise. Their distribution with respect to negation suggests that they do raise and they may thus have V2 distribution in questions or, in the case of *be*, with fronted complements. Similarly, other auxiliary verbs may move. Consider the examples in (1.5).

- (1.5) a. The cat is not happy.
a.' I haven't a euro.
b. Where is the cat?
b.' Have you a euro?
c. We may not leave early.
c.' May we leave early?

⁵ Adverbs and negation are shown here adjoined to VP, an analysis of these constituents in which they occupy the specifiers of aspectual phrasal projections above VP does not change the essential distributional facts here.

We may assume that T in English has a [tense] affix with a strong Aux-feature (Radford 2004: 68). This serves to attract the nearest verbal head when this is an AuxP. For thematic verbs, the association of the [tense] affix with a verbal head is achieved by affix lowering to the in situ thematic verb. Lasnik (2007) provides an analysis in terms of parameterised Infl which seeks to explain why *be* and *have* may raise but other thematic verbs do not. The proposal is that Infl may be either featural or affixal and the distribution of verbs is governed by their specification in the lexicon. As *be* and *have* in English are highly suppletive, they are assumed to be fully inflected in the lexicon and enter the derivation with inflection. They must then raise to strong featural Infl to check their agreement features. As thematic verbs are bare in the lexicon, they remain in situ in syntax and affixal Infl is lowered to the verb at PF. However one may want to characterise the distinction, L1 German learners must make this distinction and abandon the L1 parametric property, which forces consistent raising of both thematic and auxiliary verbs.

Although I have been referring to *be* and *have*-raising so far, it should be pointed out that there is a distinction between the two. Copula *be* conforms to a stricter V2 distribution, whereas the pattern with *have* is optional and subject to register and dialect variation (1.6).

- (1.6) a. Where is the cat?
a.' *Where does the cat be?
b. Have you a euro?
b.' Do you have a euro?

Copula *be* also gives rise to inversion structures in declarative clauses which are not found with *have*. The discourse constraints on stylistic and locative inversion to be discussed below can capture why copula *be* is prevalent in SI. However, it cannot fully explain the syntactic behaviour. In addition to permitting widespread inversion in stylistic inversion contexts, inversion is a syntactic requirement with *be* in declaratives where complements of the copula are fronted (1.7).

- (1.7) a. The cat is on the mat.
 b. On the mat is the cat.⁶
 c. *On the mat the cat is.

As the final example in particular illustrates, inversion of *be* is not simply an optional variant but rather a grammatical requirement. So not only do learners have to acquire the discourse requirements on SI, they need to acquire the special behaviour of copula *be* with its syntactic V2 distribution.

1.3.2 Question Formation

Both *wh*-questions and direct questions in English require subject-auxiliary inversion (SAI) as exemplified by the distinctions in grammaticality in the sentences in (1.8).

- (1.8) a. Where have you holidayed?
 a'. *Where holidayed you?
 a''. *Where you have holidayed?
 b. Did you meet Babsi?
 b'. *Met you Babsi?
 b''. *You did meet Babsi?

Inversion around the full lexical verb is ungrammatical. English questions involve head-movement whereby the auxiliary raises from I to C while the subject remains in its canonical position in Spec-IP giving rise to subject-auxiliary inversion. Pesetsky and Torrego (2001) suggest an explanation for this sort of movement based on feature checking. It is assumed that in main *wh*-clauses, C bears uninterpretable *wh* and T features which are checked by movement of a *wh*-phrase in the case of the *wh*-feature and by movement of an auxiliary from T to C in the case of the T feature. We can assume again that the difference between direct question formation and *wh*-

⁶ For the study, I consider only inversion of the form XP-V-Subj, other possible orders such as *there*-insertion, which would be possible here as in *There is a cat on the mat*, are not included as inverted structures.

interrogatives is the presence of an overt *wh*-operator in the latter class of questions, and a null operator in the former.

The independent lack of lexical verb movement interacting with the requirement that a T feature on interrogative C be checked explains the insertion of dummy *do* in instances where the clause would otherwise not contain any modal or aspectual auxiliary. This can be seen as a last resort operation where *do* is devoid of semantic content and is merged in T to fulfil a syntactic requirement which would otherwise not be satisfied and thus cause the derivation to crash (Chomsky 1995). Specifically, if *do* were not merged in T and subsequently moved to C, there would be no available means of checking the uninterpretable T feature on C.

A further irregularity in English is the asymmetry between subject *wh*-questions and all other types of *wh*-questions (1.9).

- (1.9) a. When did you go to the party?
b. Whom did you meet at the party?
c. Who went to the party?
d. *Who did go to the party?

SAI or *do*-insertion is ungrammatical in subject *wh*-questions (1.9d unless *do* receives heavy emphasis). Pesetsky & Torrego's (2001) account of this asymmetry assumes that the subject *wh*-constituent's nominative Case may check an uninterpretable T feature on C, while other *wh*-constituents, which lack nominative Case, require overt movement of auxiliaries or *do*-support to for this checking to proceed. German, by contrast, is consistent in question formation, and on the symmetric analysis of V2, German interrogatives always involve verb movement to C and fronting of a *wh*-constituent, no matter what the syntactic type, to Spec-CP.

1.3.3 Negative Inversion

Clauses with initial negative operators also require SAI in English. The distribution of modal/aspectual auxiliaries, dummy *do* and lexical verbs in English negative inversion (NI) is strikingly similar to that in interrogatives, see Ex. (1.10).

- (1.10) a. At no point did I agree to their demands.
 a'. *At no point I did agree to their demands.
 b. At no point have I ever agreed to their demands.
 b'. *At no point I have ever agreed to their demands.
 c. *At no point I agreed to their demands.
 c'. *At no point agreed I to their demands.

The parallelism of SAI in interrogatives and in NI would seem to indicate that a similar analysis can be employed to account for both types of structure whereby auxiliaries or dummy *do* move in a similar fashion as with interrogatives from T to C. However, this is not entirely unproblematic for NI. The patterning of NI with topicalisation and the fact that SAI remains a requirement in embedded clauses (unlike embedded interrogatives Ex. (1.11)) has been taken to indicate that an articulated left-periphery is needed to account for this. This is based on Rizzi's (1997) Split-CP proposal which assumes CP should be split into a range of functional projections which encode pragmatic properties such as illocutionary force, topic and focus.

- (1.11) a. He asked me whether I agreed to their demands?
 a'. *He asked me whether did I agree to their demands?
 b. I claimed that at no point did I agree to their demands.
 b'. *I claimed that at no point I agreed to their demands.

Haegeman and Gueron (1999) offer a Split-CP analysis which accounts for this sort of data and the interaction of NI with topicalisation (Ex. 1.12) (Haegeman & Gueron's 82d, 83 and 84c p. 338-9).

- (1.12) a. I promise that during the holidays on no account will I write a paper.
 b. %??I promise that on no account during the holidays will I write a paper.
 c. *I promise that during the holidays will I on no account write a paper.
 d. *I promise that on no account will during the holidays I write a paper.

They propose that the topicalised XP *during the holidays* occupies Spec-TopP, the higher node in Rizzi's system. The preposed negative constituent therefore targets a lower functional projection. Haegeman & Gueron identify this as FocP, with the auxiliary moving to the Foc head (see 1.13). The motivation for the movement is that the auxiliary in this case moves to satisfy the NEG-Criterion (Rizzi 1997: 315; Haegeman & Zanuttini 1991; Haegeman 1995: 180).

(1.13) [CP C° that [TopP *during the holidays* [FocP *on no account* Foc° *will* [AgrP

We will continue to refer to CP for the sake of simplicity. This may, however, be seen as a cover term for whatever constellation of functional projections in the left-periphery one might prefer. An important point to note here, which is made more explicit by using different discourse-relevant functional projections, is that V2 word order in this instance is crucially dependent on discourse-pragmatics. Thus the pragmatic choice to front a negative operator has the consequence of triggering a syntactic V2 requirement. The Neg-Criterion referred to above is conceived of as a requirement that a strong operator feature must be checked in the checking domain of C. As one instantiation of the Affect-Criterion, this is a general condition in a number of languages that an affective operator (e.g. *wh*, *neg*, *foc*, etc.) must be in a Spec-Head configuration with an appropriate head to check its affective features (Haegeman 1995: 93).

1.3.4 Pragmatic Word Order Variation and Inversion

English allows a number of other departures from canonical SVO word order in various contexts (see Birner and Ward 2004 in general, Culicover & Winkler 2008 specifically for summary of those involving inversion). For present purposes, where the focus of interest is subject inversion, only stylistic inversion (SI) is reviewed. It has been suggested that this is another possible manifestation of V2 in English (see Westergaard 2007a; and Ch 4) and therefore its presence in the input and/or the production of learners could shed light on the acquisition of the English V2 system or transfer of V2 patterns from German. Furthermore, it will be necessary to distinguish between XVS orders where this is an example of transfer and where it might be the productive use of English pragmatic word order variation.

Before commencing with the review of SI, some terminological clarifications are in order. Firstly, with regard to inversion itself, the type of inversion which is to be described is word order of the form X-V-S, where X is any non-subject (and non-negative, non-*wh*-element) and V is a full thematic verb, as exemplified in (1.14). This accords with the definition of inversion provided by Birner (1994: 235) as “a sentence in which the logical subject appears in postverbal position while some other, canonically postverbal, constituent appears in clause-initial position.”

(1.14) On the desk sat a number of scholarly works.

This sort of inversion has variously gone under the guise of stylistic inversion (SI) or locative inversion (LI) in the literature. The two terms are used interchangeably in what follows, although locative inversion can be understood to refer more narrowly to inversion after fronted locative adverbials or PPs.

Finally, on the terminological front, I will continue to use topicalisation, fronting and preposing to mean movement to the left-periphery of the clause. I accept that these terms may mean different things to different people (cf. Frey 2005 for finer terminological distinctions and whether fronting need always involve marking an element as a topic). However given an assessment of the field of information structure as one where “terminological profusion and confusion, and underlying conceptual vagueness, plague the relevant literature to a point where little may be salvageable” (Levinson 1983: x quoted in Lambrecht 1994:1), it would be nigh impossible to tease apart the issues here. For an overview of various approaches to sentence form in terms of topic/focus, old/new, etc. and the terminological issues connected to these approaches, see Vallduvi (1990: 35).

1.3.4.1 The Syntax of Stylistic Inversion

Stylistic inversion has been well studied in various theoretical traditions and the variables which permit felicitous SI in English are relatively well established. These are summarised below as the interface restrictions on stylistic inversion. This is covered in some detail as it forms much of the rationale to be drawn upon in the corpus methodology. The syntactic analysis of SI is, however, a more complex and

controversial issue. I will assume along with Westergaard (2007a) that SI is a further manifestation of residual V2 in English (see also Salzmann 2008). However, the aim is to abstract away from the specific technical syntactic apparatus to the task facing the learner, which in the case of the German-speaker is to note that English does in fact license different forms of V2 but that it does not follow the generalised V2 pattern of their L1.

Early proposals for SI in fact invoked a V2 style verb movement analysis. Emonds (1976: 29-30) posits movement of the preposed adverbial followed by movement of the lexical verb into second position. However, the Emonds type proposal became redundant with the VP-internal subject hypothesis (Koopman & Sportiche 1991) in combination with the assumption that the verb in SI must be unaccusative, though as we shall see, this assumption is not entirely straightforward. The surface postverbal realisation of the subject could then be explained without recourse to verb movement. Rochemont & Culicover (1990) have also assumed raising of the verb to I plus remnant VP topicalisation as the structural explanation for SI. Although this view is abandoned in later work (Culicover & Levine 2001), similar proposals have recently been revived as a derivation of SI as V2 (Westergaard 2007a, Salzmann 2008).

More standard accounts, which do not assume verb movement, must account for the postverbal realisation of the subject with some other mechanism. The two main proposals in the literature are that the subject is either in situ in the VP as the internal argument of an unaccusative verb or has been moved rightward to an adjoined position. Rochemont (1986) argues that the postverbal subject moves rightward to a VP-adjoined position which is uniquely associated with presentational focus and this is picked up by Levin & Rappaport-Hovav (1995), whose view of inversion in terms of discourse constraints accords well with the idea that the adjoined syntactic position is dedicated to a particular discourse function. Similar rightward movement proposals had been made in earlier work where there is disagreement as to whether the subject is adjoined to VP or S (i.e. IP) (Stowell 1981; Safir 1985).

The in situ proposal relies on an analysis of the verb in SI as always being unaccusative (or on a mechanism which allows unergatives to project unaccusative argument

structure in syntax Coopmans 1989, Mendikoetxea 2006a, b). This subject is assumed to originate as the internal argument of the verb as the sister of V. The assumption is then that PP-V-NP_{SUBJ} order is the result of the subject being left behind in VP rather than moving to Spec-IP. Culicover & Levine (2001) exploit both analyses of the subject position and expound an idea of two distinct types of inversion, one involving right-adjunction and one where the subject remains in situ in VP.

No matter what specific structural account one accepts for the postverbal subject, the challenge is to explain how this postverbal realisation “is somehow parasitic on the preposed PP” (Safir 1985: 301). Coopmans (1989: 735) achieves this by postulating that a topicalised adverbial complement optionally licenses semi-pro-drop in English while the lexical subject may remain in VP or move to a right-adjoined position. However, others have argued that the PP itself functions as a syntactic subject in Spec-IP while the thematic subject remains in VP (Hoekstra & Mulder 1990; Bresnan 1994). Hoekstra & Mulder (1990) for example cite evidence where SI is embedded under an overt complementizer as evidence that the PP cannot be higher in the structure in C and is presumably in Spec-IP as in (1.15) (their ex. 72, p. 32).

(1.15) We suddenly saw how into the pond jumped thousands of frogs.

Evidence from raising, where it is the PP which raises from an embedded SI would also seem to support the view that the PP functions as a syntactic subject located in Spec-IP, see (1.16) (Culicover & Levine 2001: 287).

- (1.16) a. A picture of Robin seemed to be hanging on the wall
b. On the wall seemed to be hanging a picture of Robin.

Coopmans (1989: 735) assumes that that the fronted PP must be subcategorised in some way by the verb to licence the inverted structure. However, it has been shown that this constraint does not in fact hold (Salzmann 2008) and that adjuncts occur in SI, (1.17). So it seems that the fact is that there has to be *something* fronted but it is not entirely clear which position this fronted constituent occupies and why it should licence subject-verb inversion.

- (1.17) a. Thus spake Zarathustra
 b. Next door, to the east, decays Ablett Village. (Levin & Rappaport-Hovav 1995: 235)

Drawing on what has been discussed so far then, the derivations usually assumed for SI in English are schematised in (1.18), where (1.18a) illustrates non-movement of the subject of an unaccusative verb and (1.18b) where the subject has been postposed to a position to the right of VP. Learners of English must therefore notice that the verb must have a specific argument structure and/or that the subject needs a specific discourse interpretation to acquire the syntax of SI.

- (1.18) a. IP [PP_i I° VP [V NP_{subj} t_i]]
 b. IP [PP_i I° VP [V t_k t_i] NP_{subj}]]

1.3.4.2 Interface Conditions on Stylistic Inversion - Information Structure⁷

There is general agreement that the function of inversion is to introduce new information in the form of the referent of the inverted subject into the discourse (cf. Bollinger 1977, Penhallurick 1984, Rochemont 1986, Rochemont & Culicover 1990, Bresnan 1994), although exactly how this is treated may differ from study to study.

According to Birner (1994: 234) “inversion is an information-packaging mechanism, allowing the presentation of relatively familiar information before a comparatively unfamiliar logical subject.” She reports results obtained from an analysis of a corpus of inversion structures which point to the conclusion that “we can posit a pragmatic constraint on inversion: the preposed element in an inversion must not be newer in the discourse than the postposed element” (Birner 1994: 245). This is in line with traditional functional approaches to word order which posit general tendencies of the sort “old before new”, “theme before rheme”, “topic before focus”. The difference in Birner’s proposal (also Birner & Ward 1998) is that she builds upon a conception of discourse status developed by Prince (1992) in terms of two separate variables:

⁷ “Syntax-pragmatics interface” or “syntax-discourse interface” will be used interchangeably here as the label for the interface where syntactic information is related to information structural/pragmatic/discourse concepts such as topic/focus, given/new, contrast, etc.

discourse newness and hearer newness. This allows the building of a matrix in which the referent of a subject may be new or old in terms of the discourse or to the hearer. In this way, a gradient notion of information status can be applied which in turn facilitates an analysis in terms of *relative* familiarity of the preposed and postposed constituents.

By contrast, the more usual function ascribed to SI has been presentational focus (Rochemont 1986, Rochemont & Culicover, Bresnan 1994), “in which the referent of the inverted subject is introduced or reintroduced on (the part of) the scene referred to by the preposed locative” (Bresnan 1994: 85, referring specifically to locative inversion). This is obviously not susceptible to a gradient treatment à la Birner, but importantly it still assumes that the referent of the inverted subject provides new information. The specific nuances of the different proposals notwithstanding, it should be clear that the broad empirical consequences of the two views share much in common as illustrated by Bresnan’s (1994: 85) discussion of the exchange in (1.19) (her ex. (42)).

- (1.19) a. I’m looking for my friend Rose.
b. # Among the guests of honour was sitting Rose.
c. Rose was sitting among the guests of honour.

The response in (1.19b) is pragmatically anomalous and Bresnan (1994: 85) analyses this as being due to (i) a lack of a scene involving *guests of honour* having been set in the question, and (ii) as *Rose* has just been mentioned in the question, the referent cannot be (re-)introduced naturally using an inverted structure. That is, the inversion is not presentational focus as it does not introduce new information on the part of the PP. The reasoning in (i) could just as easily be made in accordance with Birner’s view. Instead of locating the infelicity of (1.19b) in the lack of scene-setting involving *guests of honour*, it could be stated that the preposed PP is relatively newer in the discourse compared to the referent of the subject. *Rose* has just been mentioned while *the guests* had not been evoked previously.

The overarching function of arranging new vs. old information in a particular way in SI is usually assumed to be discourse connection. Green (1980) for one has explicitly

advanced the idea that this is one of the construction's more important pragmatic functions. In Birner's (1992: iii) view, the function of inversion is also the linking of "relatively unfamiliar information to the prior context via the clause-initial placement of information that is relatively familiar in the discourse."

1.3.4.3 The Lexicon

As the syntactic analysis of SI illustrated, it has traditionally been assumed that the structure requires an unaccusative verb. This syntactic view of locative inversion as an unaccusative structure has however been subject to criticism. Levin and Rappaport-Hovav (1995: 216) attribute "its unaccusative-like distributional properties to the fact that this construction is associated with a particular discourse function, which in turn favors certain semantic classes of verbs." They investigate an array of empirical evidence in the form of naturally occurring tokens of inversion, which show that the class of verbs selected in the structure is both too small as not all unaccusative verbs are felicitous in SI and too large in that unergative verbs seemingly do in fact occur in inversion, thus negating the proposed use of inversion as an unaccusativity diagnostic.

Birner (1995) extends the proposal in her earlier paper (1994) to include a pragmatic constraint on the verb in inversion constructions. So in addition to *be*, which after Hartvigson and Jackobsen (1974) she considers inherently "notionally light", inversion occurs with other verbs which are rendered informationally light in context. The information content of the verb may be inferable from the previous discourse or from the pre- and postposed constituents in the inversion structure where the verb appears. Thus Birner (1995) and Levin & Rappaport-Hovav (1995) are in broad agreement that it is in fact discourse-pragmatic restrictions which are the defining characteristics governing the type of verb which may appear in locative inversion constructions. Levin & Rappaport-Hovav (1995: 231) note that the canonical semantic classes of verbs which appear in this construction are verbs of existence and appearance. This is of course to be expected if there is a discourse requirement that the verb be informationally light: the verbs of existence and appearance add nothing new to a discourse apart from introducing or pointing to the existence of some other entity, i.e. there is no new action or information predicated of the subject. This then obviously subsumes those proposals

which characterise inversion as a device to mark presentational focus, i.e. introducing some new entity into the discourse. In the same way, it accounts for the fact that transitive verbs are unacceptable in locative inversion constructions in English. The reason on the Levin & Rappaport-Hovav account is that a transitive verb together with an object introduces new information about the actions of a subject.

The discourse restriction can also be seen to apply to cases of unergatives in inversion. Levin & Rappaport-Hovav (1995) argue that where unergative verbs occur in SI, they impose strict selectional requirements on their arguments to the extent that the inverted subject and the verb are mutually predictable and so do not add any new information to the discourse. When a verb denotes a characteristic activity of the postverbal subject NP, it is inherently informationally light. An illustration is provided by (1.20) (Levin & Rappaport-Hovav's ex. 80, p. 259).

- (1.20) a. From the flagpole waved a tattered banner.
a'. *From the roof waved a bearded student.

As waving is characteristic of flags, (1.20a) is felicitous in so far as it serves to point to the existence of a particular flag rather than introducing any discourse-new information about the activity of the subject. In (1.20a'), on the other hand, in the sense of greeting, *wave* is in no way characteristic of the existence of students and so violates the principle that the verb cannot introduce discourse-new information as it tells us something new about the activity of this particular student.

1.3.4.4 Phonology

In what follows here, I confine the outline of the role of phonological issues in SI in the main to the Culicover & Levine (2001) proposal to extend the role of heavy noun phrase shift (HNPS) to account for various distinctions in the acceptability of stylistic inversion (see also Rizzi & Shlonsky 2006; Culicover & Winkler 2008 on prosodic constraints and focus marking).

The Culicover & Levine proposal distinguishes between two distinct types of stylistic inversion, which they term light inversion (LI) and heavy inversion (HI). LI occurs with unaccusative verbs, while HI may also occur with unergatives with the proviso that the subject be grammatically heavy or complex, or prosodically prominent. Their light inversion is in fact the traditional syntactic analysis of SI with unaccusatives where it is assumed that the subject remains in situ in VP and the PP is raised to Spec-IP. The postverbal subject in HI, by contrast, is the result of a post-posing mechanism as represented in (1.18b) above. The proposal is that PP-V-NP_{SUBJ} order is the result of first raising the subject to Spec-IP followed by rightward movement, i.e. heavy shifting the complex or prosodically prominent NP, to a position right-adjoined to IP.

In addition to syntactic tests involving extraction and control, the basic evidence adduced in support of the claim involves the sort of distinctions in (1.21) and (1.22) (Culicover & Levine's ex. 18 and 19, p. 292).

- (1.21) a. Into the room walked Robin.
 b. Into the room walked Robin carefully.
 c. *Into the room walked carefully Robin.
 d. Remember Robin? Well, into the room walked carefully... ROBIN!
 e. Into the rooms walked carefully the students in the class who had heard about the social psych experiment that we were about to perpetrate.
- (1.22) a. *In the room slept Robin.
 b. *In the room slept Robin fitfully.
 c. *In the room slept fitfully Robin.
 d. Remember Robin? Well, in the room slept fitfully... ROBIN!
 e. In the room slept fitfully the students in the class who had heard about the social psych experiment we were about to perpetrate.
 f. In the room slept the students in the class who has heard about the social psych experiment we were about to perpetrate.

The examples are designed to show that light subjects cannot appear postverbally when the verb is unergative (1.22a-c). However, when the subject is prosodically prominent or grammatically complex, postverbal realisation is in fact possible as in (1.22d-e). When compared to (1.21c-e), this seems to indicate that only heavy or prosodically

prominent subjects can be shifted to the adjoined position. (1.21c) shows that a light subject in this position with an unaccusative causes unacceptability. This then gives rise to the “illusion” of SI in contexts where in fact the heavy inversion mechanism is at work.

While this sort of data provides an interesting insight into the role grammatical weight might play in SI, it is not entirely compelling. As Culicover & Levine (2001: 307) admit, it raises several problems. Perhaps the most salient of these is the fact that it does not provide any principled account of why SI is infelicitous with transitive verbs with an overt object. HI should in principle be available to transitive verbs if the subject fulfils the necessary criteria in terms of being grammatically heavy or prosodically prominent. Examples of exactly this sort of structure with transitive verbs are presented and deemed to be grammatical, although awkward, Ex. (1.23) (Culicover & Levine 2001: 308)

- (1.23) a. The economist predicted that at that precise moment would turn the corner the economics of half a dozen South American nations.
b. In the laboratory were dying their terrible deaths the more than ten thousand fruit flies that Dr. Zapp had collected in his garden over the summer.

These examples indeed are awkward *at best*, and what is more, according to the corpus studies by Birner (1992, 1994, 1995) and Levin & Rappaport-Hovav (1995), they simply do not occur in English. For example, in Birner’s corpus of 1778 tokens of inversion, only two are seemingly transitive ((1.24) = Birner 1995 ex. 20).

- (1.24) a. Early in 1661 took place a general election
b. Under this shelter take root and thrive all monstrous and parasitic growths.

Importantly, as Birner points out, these are probably best analysed as transitive constructions lexicalised as intransitive verbs rather than as verb plus object. If we replace these with a true object, the result is ungrammatical, even when the subject is heavy or complex, compare the distinctions in (1.25). It therefore seems likely that the argument structure of the verb is a robust predictor of its felicity in inversion structures.

- (1.25) a. From the shelf fell a book.
b. *From the shelf took a book the stern librarian who had a passion for silence.

The exact role of phonological weight as an independent variable is then not as clear as Culicover & Levine have suggested. It is in many ways unsurprising that phonological heaviness and informational heaviness coincide, perhaps giving the impression that phonology plays a greater role than is really the case. Phonological weight is of course an important factor in English word order variation, as we will see below. It seems, however, that there is only tenuous evidence to propose such a prominent role for this as an independent variable in SI.

1.3.5 A Note on Verb-Adverb-Object Order in English

As outlined above, verb-adverb-object order is investigated in the study as a diagnostic for the transfer of V2. VAO is, however, possible in certain circumstances in English (usually examples of “heavy noun phrase shift” (HNPS) (Kimball 1973)). This is however subject to certain constraints and it will be necessary to differentiate HNPS from non-target structures. From a psycholinguistic point of view, it has been pointed out that HNPS facilitates online production and comprehension (Stallings et al. 1998, Wasow 1997a, b, Hawkins 1994). For a full treatment of various factors relevant to HNPS, refer to Wasow (2002) and Hawkins (1994). I base the following discussion largely on Wasow’s summary of the variables usually cited in the literature as determinants of postverbal constituent ordering. An example of the structure in question is provided in (1.26).

- (1.26) a. *You must read carefully the book.
a’. You must read carefully the first chapters of the syntax book, which has been set for homework.

A phonologically heavy or complex object may be “shifted” past an adverbial towards the end of the clause. This sort of observation is not new (cf. Behagel 1930 for German, Quirk et al. 1972 for English). The generalisation is that heavier elements will tend to be

postposed towards the end of a clause (Quirk et al's "Principle of End Weight"). In addition to adverb placement, it has a role to play in various word order alternations in English such as the relative ordering of postverbal NPs and PPs, the verb-particle construction, the locative alternation, etc. (cf. Wasow 2002).

The central questions revolve around issues of what triggers rightward shifting and how properly to characterise this in terms of the complexity of the shifted NP and its discourse status. A number of approaches to the issue of the 'weight' of a heavy NP have been suggested, which may involve the syntactic complexity of the NP or simply weight in terms of the amount of phonological material the NP contains (again Wasow 2002: 15-17 for review). Wasow's testing of a number of different measures of grammatical weight reveals that it is difficult to tease apart the issues and that "a single measure of weight may subsume what appear to be effects of both length and complexity" (2002: 41).

In addition to weight, HNPS shares with SI a constraint that the non-canonical word order is connected to the information status of the constituents. Wasow (2002) investigates the idea of whether discourse newness affects constituent ordering on the basis of corpus and experimental data and finds evidence that this does indeed seem to reflect the ordering preferences. He points out however that this is just one variable of information status and it ignores dimensions such as 'importance' (Wasow 2002: 81). The important point for present purposes is that newness seems to be a relevant variable in the relative ordering of postverbal NPs relative to adverbs, PPs and other postverbal constituents.

1.4 Word Order in Bulgarian, French and Finnish

In order to identify transfer, the corpus study described in Chapter 6 employs a comparative methodology involving the production of L1 Bulgarian, French and Finnish learners of L2 English in addition to L1 German. To provide the linguistic background, the following therefore reviews relevant aspects of each of these. I will ignore the intricacies of syntactic analyses for the other languages involved in the contrastive corpus study and outline the main aspects of constituent order in French,

Bulgarian and Finnish which might impinge upon the production of the relevant word order diagnostics in L2 English. In particular, I concentrate on possible inversion structures which might transfer into L2 English. Although different subject-verb inversion properties are possible in Bulgarian, Finnish and French, the relevant point is that none of these shares a V2 constraint with German (and Dutch) and therefore are used as a foil for the German learners' production to establish V2 transfer properties or the use of inversion which is licensed in English.

Bulgarian

Along with other Slavic languages, Bulgarian is generally classified as a free order SVO language. SVO is the most frequent, basic, unmarked word order, but "apart from the location of clitics, there are virtually no syntactic constraints on the ordering of phrases in main declarative clauses" (Siewierska and Uhlířová 1998: 109). Word order tends to maintain theme-rheme order.

Subject-verb inversion may in fact be communicatively neutral in certain contexts where S-V order would be emphatic (Ex. 1.27 Dyer 1992: 92-93).

- (1.27) a. *Započna vojna.*
began war
"A war began."
b. **Vojna** *započna*
A war began.

In addition, there is a preference in existential and locative clauses to place the entity whose existence is being asserted after the locative or existential verb (Siewierska and Uhlířová 1998: 125-126). In these instances a preverbal subject NP would tend to be accompanied by the numeral 'one' or an indefinite pronoun; otherwise it would receive a definite interpretation. In presentative clauses, VS order is also the norm; with initial subjects, the clause is stylistically marked (Ex 1.28 Siewierska and Uhlířová 1998: 125).

- (1.28) *Edna žena e v stajata.*
one woman is in room.

“A woman is in the room.”

Wh-questions in Bulgarian require subject-auxiliary inversion or subject-main verb inversion after fronted *wh*-constituents. All *wh*-constituents in multiple questions are fronted. Yes/no questions are formed by the enclitic particle *li* in Bulgarian and does not involve inversion of the subject with verbal elements.

Negation is formed with the negative particle *ne* which is prefixed to auxiliaries or finite main verbs. In Bulgarian, unlike most other Slavic languages, the negative marker can be separated from the verb by other enclitics (Siewierska and Uhlířová 1998: 131).

Finnish

Finnish is also a free word order language which does not exclude any possible permutations of the constituents S, O and V (Vilkuna 1998: 175). The distribution of different word order permutations is regulated by discourse and information structure. Neutral orders are SVO and OVS, with the other possible orders associated with contrastive focus, with appropriate intonation contours in speech (Ex. 1.29 Karttunen and Kay 1985: 280).

- (1.29) a. Esa luki kirjan Esa read a book.
 SVO
 b. Kirjan luki Esa. The book was read by esa.
 OVS
 c. **ESA** luki kirjan. It was **ESA** who read the book.
 SVO
 d. **KIRJAN** Esa luki. It was a **BOOK** that Esa read.
 OVS
 e. **LUKI** Esa kirjan. Esa **DID** read a book.
 VSO

Holmberg et al (1993: 192) account for this as general XP-movement to initial position for focussing (and questioning as a special case of focussing). Any constituent compatible with focus or which can be questioned may be fronted to this position with affixation of the question or focus particle. Questions are thus formed by adding the question particle *-ko/-kö* to the constituent being questioned and fronting it (Ex 1.30, Holmberg et al 1993: 192).

- (1.30) a. Ostiko Jussi sen kirjan?
 bought-Q Jussi that book?
 Did Jussi buy that book?
- b. Senkö kirjan Jussi osti?
 that-Q book Jussi bought
 Was it that book that Jussi bought?

Negation is formed with a negative auxiliary *en* which precedes the main verb. It may, however, be separated from the main verb by adverbials or an object preposed to pre-verbal position (Vilkuna 1998: 212-213).

- (1.31) Minä en sitä tehnyt.
 I NEG it do:PART.
 I didn't do it.

French

Basic word order in French is SVO with pre-verbal object clitics, S-Obj_{CL}-V. French also allows a range of inversion structures, which have also traditionally been referred to as stylistic inversion (Kayne 1972). However, this may mask the fact that different inversion structures have different properties (Marandin 2001: 195). These include inversion in extraction contexts (Ex 1.32), heavy subject inversion (Ex 1.33) and spatio-temporally dependent clauses in three contexts (Ex 1.34), time adverbials, subjunctive complements, and sentences with athetic interpretation in a narrative (Bonami et al 1999: their exs. 1-3).

- (1.32) **Voice le texte qu'a écrit Paul.**
 Here is the text that wrote Paul.

- (1.33) **Ont accepté notre proposition les députés de la majorité ainsi que les non-inscrits.**

Have accepted our proposal the MPs of the majority as well as the nonregistered ones.

- (1.34) a. Dès que **se lève le soleil**, le coq chant.
As soon as rises the sun, the rooster sings.
- b. Je veux que soit invitée **Marie**.
I want that be invited Marie.
- c. (Alors) **arriva Marie**.
(Then) arrived Marie.

The types of full-verb inversion permitted in English thus form a subset of the inversion structures of French, with English stylistic or locative inversion being roughly equivalent to (1.34c) as unaccusatives may also take part in inversion in French (Marandin 2001: 196). Thematic verb inversion is also possible in interrogatives in French although it is not a syntactic requirement and the uninverted order is also grammatical (Ex 1.35).

- (1.35) a. Que fais-tu ce soir?
What do you this evening?
- b. Qu'est-ce que tu fais ce soir?⁸
What you do this evening?

French has thematic verb movement to I and the verb therefore always appears to the left of sentence adverbs and negation. Negation includes a preverbal particle *ne*, which is often not pronounced in spoken French, the negator is generally assumed to be *pas*.

- (1.36) a. Je fais toujours mes devoirs.
I do always my homework.
- b. Je (ne) fais pas mes devoirs.
I (NEG) do not my homework.

Thus all the languages to be studied allow surface patterns which may transfer to English giving rise to inversion. However, these are not all clustered under a single syntactic parameter as is the case with V2 in German and thus there should be

⁸ Non-inverted French interrogatives require the addition of *qu'est-ce*. These structures are nonetheless parallel.

distinctions in the patterns for the different L1 groups relative to the L1 German learners assuming that V2 may transfer.

1.5 Summary

The main parametric differences between German and English mean that L1 German speaking learners of L2 English must acquire the fact that English is [-Agr], i.e. it does not allow thematic verb movement out of VP and that it is on the whole [-V2], i.e. it does not require head movement to a functional projection on the left-periphery of the clause to fulfil a syntactic requirement. However, English retains a subset of constructions which have a V2 requirement. The more differentiated V2 settings of English must be put in place, but it must also be established that these V2 requirements cannot be satisfied by head movement of thematic verbs. So they must acquire the syntactic constraints on inversion constructions in English, i.e. that only auxiliaries may move and that only the unaccusative class of thematic verbs may give rise to inversion. For interrogatives and negative inversion, this involves a further complication in that *do*-support must also be acquired where there is no modal or aspectual auxiliary available for movement. In addition, they must acquire the interface constraints on the distribution of full verb inversion, i.e. their exploitation in discourse for text connection and to introduce new referents of subjects. On the assumption that L1 parametric values transfer in L2A, we can predict that L1 German speaking learners of English should produce word order patterns which diverge from those of other L1 groups in that there should be evidence of non-target verb placement which reflects the continued influence of L1 German [+V2], [+Agr] grammar.

2 Transfer, Access to UG and Parameter Resetting

2.1 Introduction

In this chapter, we explore theories of the initial state and parameter resetting in SLA. These models predict varying degrees of L1 transfer, especially at the initial state of L2A, and how this impinges on subsequent resetting of parametric options to their target L2 values. The nature of the initial state in particular has preoccupied many theorists of SLA. The major theories which have been proposed tend to differ along the axes of the extent of transfer from the L1. In the following sections we outline the main theories of the initial state according to the extent of L1 transfer they assume. Subsequently, we explore models of L2A which propose that implicit UG-driven acquisition is no longer in operation and thus learners must resort to different learning mechanisms for L2A.

2.2 Transfer and UG: Theories of the Initial State

Constraints of space preclude an in depth consideration of the wealth of empirical data and analysis offered by the various competing initial state theories. I will therefore concentrate on general conceptual issues connected to the proposals (which provide firm enough grounds to accept that Full Transfer is the most satisfactory model) and refer readers to the original publications for further details and supporting empirical data for each of the models. What unites all the theories of the initial state and parameter resetting is the assumption that UG is available to L2 learners, although some scholars assume that there may be specific deficits in the parametric system (e.g. the Local Impairment Hypothesis, Beck 1998). A main source of evidence that UG informs L2A is that there is no evidence for “wild” interlanguage grammars. That is, even where an L2 grammar differs both from the L1 and the target language, it is nevertheless possible to account for the form of the grammar in terms of UG constraints (cf. White 2003a: 42-56). Each interlanguage stage will be a natural language system and no errors which violate principles of UG should occur. We will not review the evidence for or against wild grammars here and assume that it is in principle possible to account for properties of the interlanguage grammars in terms of UG. The question is whether this

should taken to indicate that UG as a language-specific learning mechanism is at work. We return to this issue below, and turn now to the issues of the influence of the L1 in addition to UG at the initial state.

2.2.1 Strong UG

Rather surprising perhaps, it has been proposed that there is no L1 influence at all at the initial state in SLA and that, from a cognitive point of view, the second language learner approaches the L2 very much in the same way as a child acquiring her first language. On this view, the development of L2 grammars is guided solely by UG. Two such hypotheses are the Strong Continuity Hypothesis (Epstein et al. 1996, 1998) and the Initial Hypothesis of Syntax (IHS) (Platzack 1996).

While the Epstein et al proposal is not forwarded as an explicit hypothesis of the initial state in SLA (Epstein et al 1996: 750), it implies that UG, without any transfer from the L1 must be the initial state and that interlanguage grammars at every stage of development are constrained only by UG. I follow White (2003a: 89) is assuming that this is the case, even though Epstein et al (1996: 751) deny that this is the thrust of their proposal. As White (2003a: 89) observes, “it is hard to conceive what the initial state could possibly be, if it is neither at least partially the L1 nor UG.”

Whatever the intended interpretation in terms of the role of UG at the initial state, the logic of the proposal dictates that there should be no L1 effects in the L2 at the outset or in the course of development, if there was never any role for the L1 in the grammatical representations of the L2. It would therefore be expected that L2 learners should arrive at a target grammar for the L2 if they have full access to UG without any complicating influence from the L1. A prediction would be that all learners of a given foreign language will follow a similar, UG defined, developmental sequence regardless of the typology of the L1. Furthermore, it is not clear what the source of non-target optionality would be in this scheme. These predictions would seem obviously untenable as there are myriad reported L1 effects in SLA, from foreign accent to the sort of (morpho)syntactic effects under discussion in the present thesis. In fact, as highlighted by White (2003a: 91-92) in the analysis of their experimental data, Epstein et al in fact invoke the L1 to explain some problematic data, i.e. that L1 Japanese learners of

English seem to be more accurate repeating sentences which test IP and less accurate with CP, which they account for by the fact that Japanese lacks syntactic *wh*-movement. This then would imply that the door is not completely shut to L1 effects that the L1 does in fact play some, rather ill defined, role in the L2.

This major weakness is compounded by the fact that the main theories of the initial state assume full access to UG and Strong Continuity therefore does not provide any significant insights which are not available from these alternative theories. Rather, the fact that the L1 is denied a role creates problems with empirical coverage as it seems incontrovertible that L1 representations must play some role at the initial state, and at subsequent stages, of SLA.

These general conceptual and empirical issues regarding the role of the L1 in the course of L2 development apply just as well to Platzack's (1996) Initial Hypothesis of Syntax. However, the technical implementation of this 'no transfer' model warrants some attention.⁹ It is observed that the pre-Minimalist P&P theory's concept of a parameter was "fuzzy" and that Minimalist theory provides a more restrictive version of parametric variation upon which to base acquisition studies (Platzack 1996: 375). Thus, the feature-strength dichotomy between +/- strong features on functional categories is the locus of cross-linguistic variation. Strong features which force movement must be checked before Spell-Out while weak features may be checked post Spell-Out.

The formal definition of the IHS is then: All instances of feature checking take place after Spell-Out (Platzack 1996: 376). For L1A, evidence from the input, where overt movement may be instantiated in the ambient language forces the child to depart from the IHS and eventually converge on the relevant feature strengths. The implication for L2A is that L2ers at the initial state revert to the IHS and thus do not show any overt reflexes of the presence of strong features. In effect, the prediction is that learners assume unmarked values for the L2 and then progress in much the same way as in L1A,

⁹ It should be noted that the theoretical underpinnings of IHS are couched mainly in terms of considerations of L1A but applied also to L2A and other developmental scenarios such as attrition and language impairment. It is not, however, offered as a specific theory of L2A by Platzack, and is therefore not developed fully for the L2A context.

setting the appropriate feature strengths on the basis of the evidence for strong features in the input.

As discussed, IHS encounters the same empirical difficulties as Strong Continuity. For IHS, it is particularly evident in the wealth of verb movement studies in L2A. It has been shown that verb movement (i.e. motivated by the checking of strong features) transfers from a V-raising L1 into a V-in situ L2 and may persist into relatively advanced stages of acquisition; the classic language pairing here is L1 French-L2 English (e.g. White 1990/91, 1992). The IHS makes the wrong predictions in this case, if there is no transfer and the L2 learner must set feature strength on the basis of the input alone, it is somewhat mysterious without invoking L1 effects to explain why a child acquiring English converges on a V-in situ grammar while an L1 French speaker optionally allows verbs to raise in their English. It is obvious that there is an L1 effect. Of specific interest for present purposes, IHS predicts that V2 cannot transfer as it is motivated by feature checking. Again, the evidence seems to contradict this, Bohnacker (2006) has shown that V2 transfers at the initial state (cf. also studies cited in Ch 5).

Platzack (1996: 380-381) does indeed note that there are differences between L1A and L2A, i.e. that L2A takes place against the backdrop of an already acquired grammar. It is not clear what is intended here as this point is not developed any further. The second L1A-L2A difference is assumed to be that even though L2ers may approach perfect mastery of the L2, it is never “engraved” in the brain like the L1, but rather is always under conscious control and vulnerable in situations of stress, intoxication, etc. From the point of view of Fundamental Difference approaches to L2A to be discussed below, this is interesting as it states that some qualitatively different cognitive-neurological processes underlie the acquisition/use of an L2. Once again, however, this is a problem from the IHS perspective as it is not clear exactly where the locus of these differences could be if there is no role for transfer and L1A and L2A both exploit the same initial state and learning procedures.

As is obvious, then, models which admit no place for the L1, whatever the specifics of their technical implementation suffer from the major drawback that they cannot account for a range of empirical facts, where transfer seems to be evident. The lack of L1

influence and strong access to UG deprives us of an explanation for non-target optionality and the apparently obvious influence of the L1.

2.2.2 Partial Transfer

Under “partial transfer” I group the Minimal Trees¹⁰ (Vainikka & Young-Scholten 1994, 1996a, b), Valueless Features (Eubank 1993/4, 1994, 1996) and Modulated Structure Building (Hawkins 2001) theories of SLA. The significant differences in these proposals will be highlighted below, they are grouped together here as they share a common point of departure in so far as they assume that the L1 plays a role in L2A, but that it only partially determines the nature of the interlanguage system at the initial state and at subsequent stages of parameter resetting.

The Minimal Trees proposal assumes that only lexical projections transfer at the initial state in SLA and that functional structure develops through the interaction of X-bar theory and the input. Thus L2ers will start out only with a VP, which has the properties of the L1 VP, but no further clausal architecture. Thus, learners at the initial state produce no verbal inflection and no lexical items such as complementizers or *wh*-phrases which are connected to the presence of functional projections above VP.¹¹ On the basis of production data from naturalistic learners of German with L1 Korean, Turkish, Spanish and Italian, Vainikka & Young-Scholten argue that only the properties of VP are transferred while functional structure emerges only gradually with an underspecified FP (functional projection) emerging first to host raised verbs, which still may not show tense/agreement inflection. On the basis of the input, the learners eventually replace this FP with the appropriate functional categories and their associated properties as instantiated in the target language. Modulated Structure Building assumes a Minimal Trees-type initial state, i.e. the transfer of only lexical projections. However, Hawkins’s (2001: 73-74) proposal differs from Minimal Trees by assuming that once

¹⁰ Minimal trees has been updated as Organic Syntax in the latest versions of the theory (Vainikka & Young-Scholten 2007) but many assumptions such as the structure building remain much the same and I review only Minimal Trees as it was offered as an explicit hypothesis of the initial state against the backdrop of the other theories under review here.

¹¹ The production data is amenable to different linguistic analyses and is subject to the perennial difficulties connected to the extent to which production or lack of production of specific morphology or lexical items in the surface string can be taken as reliable evidence for the presence or absence of particular functional projections in the underlying knowledge representations, on this and other empirical issues with the data analysis from an Minimal Trees perspective, see White (2003: 76-78).

functional projections are added to the L2 representation, they also show the effects of transfer from the L1. This can explain some of the empirical problems with apparent transfer in the functional domain, but the same basic idea is subject to the criticisms we turn to below. However, particular to Modulated Structure Building, it is unclear why functional structure cannot simply transfer directly at the initial state if it subsequently transfers at more advanced stages anyway.

As with the No Transfer approaches, the immediate objection that can be raised is that there is ample evidence for the transfer of properties associated with functional projections above VP (viz. again the verb movement studies and evidence that V2 transfers). It is not clear how Minimal Trees can account for this without positing that the properties of the functional categories may also transfer once these are added to the clause structure. This points to a more basic problem with the conceptualisation of partial transfer. Learners have access to the range of functional categories instantiated in the L1, and, by hypothesis, they also have access to the full inventory of functional projections through access to UG. Therefore, it is stipulative to assume that learners have an FP rather than immediately adding a fully specified projection above VP. More importantly, once the possibility of transfer is admitted in the model, it is, according to Schwartz & Sprouse (1996: 66) “cognitively implausible” to assume that transfer should be restricted to only lexical categories rather than the full clause-structure. They (Schwartz & Sprouse 1996: 66) observe that “it does not seem plausible in cognitive terms that these structures [i.e. particular lexical or functional projections] could be ‘excerpted’ from the cognitive state, namely, from the L1 grammar.”

A final methodological problem with Minimal Trees will be highlighted as it serves also to illustrate a problem with all theories of the initial state more generally. Minimal Trees predicts that there will be no syntactic or morphological evidence of functional projections at the initial state in L2A. Where data appears to contravene this (e.g. Schwartz & Sprouse 1996), it can always be claimed that this is precisely because the subjects are beyond the initial state and so any data is not relevant. Given the fact that there is little agreement on what constitutes the initial state, it is impossible to isolate a particular period as definitively constituting the initial state. However, this is a more pressing methodological issue for partial transfer theories than for full transfer models.

As partial transfer theories define the nature of the initial state by the *lack* of certain properties, there is a danger of circularity as the presence of the properties in question cannot then serve to falsify the hypothesis but rather to show that the initial state has been passed.

Valueless Features (Eubank 1993/1994, 1994, 1996), as a partial transfer proposal suffers many of the same issues as Minimal Trees. The claim is that the L1 grammar transfers; however, as inflectional morphology does not transfer to an L2, the strength of the abstract syntactic features associated with the tense and agreement morphology likewise does not transfer and the functional features associated with these tense and agreement functional projections are therefore set to a default ‘inert’ setting at the initial state rather than being specified as either strong or weak. An inert feature for Tense may persist at later stages of acquisition after other feature strengths have been acquired. This would predict that parameters related to the strength of tense and agreement features will be permanently impaired and that a parameter such as verb movement can never be acquired. This is in line with the ‘no parameter resetting’ approaches outlined below, but it can only be applied to settings connected to tense and agreement and therefore does not suggest that parameters in general are impossible to acquire in an L2.

Notice that the same general problem with a partial transfer account can be raised in connection with Valueless Features: why should it be the case that the whole L1 grammatical representation and feature strengths can transfer with the exception of the tense and agreement features? The claim that this is in some way connected to the lack of transfer of overt inflectional morphology is rendered without merit with the observation that second language learners tend to have prolonged problems with the realisation of inflectional morphology due the difficulties mapping from syntactic representations to morphophonological reflexes in online production despite the fact that they may have intact and target-like morphosyntactic representations (see Lardiere 1998b, 2000; Prévost & White 2000a and b for the Missing Surface Inflection Hypothesis). The problem is then one of online processing rather than the representation of features in the grammar.

In addition to empirical problems (see for example Eubank et al 1997), there are a number of well-documented conceptual issues with the Valueless Features model (see Robertson & Sorace 1999: 344-345; White 2003a: 86-87.) Chief among these is the theoretical status of 'inert' features. There is no theoretical motivation for the idea of inert features. In a system where features are specified for the binary properties [+/-strong], it is not clear how it is possible to have a feature which is inert. In addition, the assumption that inert features should give rise to optional verb movement is stipulative. On the assumption that only the checking of strong features should force overt movement, it is unexplained why movement should be optional with inert features. A more reasonable expectation would be that inert features, as they are [-strong] should actually prohibit movement in *all* contexts (Robertson & Sorace 1999: 346). Finally, it is unclear why the Tense feature in particular should prove more problematic in L2A than other functional features and why any representational deficit should be specific to this category.

Any theory which posits partial transfer will inevitably run into similar problems. It would seem that all or nothing approaches to transfer would be the most satisfactory as it is highly problematic to admit a role for transfer for only certain properties or grammatical constituents. This should not, of course, be read as a denial that some properties of an L1 may be more resistant to restructuring and seem to transfer for longer or more easily than other properties. This is to be expected given a modular organisation of the grammar. But in terms of the initial state in SLA, i.e. the general cognitive make up of a learner at first exposure to an L2, it would seem implausible, given that transfer is obviously a possibility, that it will operate only selectively.

2.2.3 Full Transfer/Full Access

Given the issues we have reviewed above with regard to partial transfer, Schwartz & Sprouse (1996: 41) seem to be on firmer ground when they argue that Full Transfer/Full Access is in conceptual terms the simplest model of the role of the L1 at the initial state of L2A as "... in terms of cognitive architecture, it does not require any additional stipulations to account for the phenomenon of L2 acquisition."

The model predicts simply that the entire L1 system transfers and the initial state in L2A is therefore identical to the endstate of L1A. In addition to Full Transfer of the L1, L2 learners have full access to UG during the course of acquisition. This is relatively unimportant in comparison to the other models so far reviewed as Partial Transfer models, and naturally No Transfer models, all assume that second language learners have access to UG. It does, however, define FT/FA in opposition to the Fundamental Difference Hypothesis (see below).

The duration of total L1 influence may be quite fleeting. Restructuring of the grammar is failure-driven and takes place when the current grammatical cannot assign a representation to parse input data.¹² This will force restructuring, which may not necessarily converge on an identical target representation, although it will necessarily be constrained by UG. The L1 grammar, the L2 input, UG and general learnability considerations are at play in the restructuring process. Where there are robust cues in the input, restructuring may be relatively swift, however “it may be that the L2 acquirer will never be able to arrive at the TL grammar: either the data needed to force restructuring simply do not exist (e.g., negative data, which are (claimed to be [...]) ineffective) or the positive data needed are highly obscure, being very complex and/or very rare” (Schwartz & Sprouse 1996: 42).

There is a problem here with the exact role of the input and triggering of parametric settings in L2A. The idea of triggering even in L1A is not at all straightforward and raises some theoretical difficulties such as what exactly might count as a trigger for a particular parameter. For example, can any structure associated with the parametric option act as a trigger for the setting of the parameter in question? Similarly, it is generally assumed that a trigger must be robust in the input in order to set a parameter, but it is not clear exactly what ‘robust’ should mean (see Ayoun 2003: 42-45 for discussion). These issues are more acute for L2A as it is difficult to determine what exactly the nature of the input is in L2A. Obviously, L2 learners will have a more

¹² An issue which is not addressed is what exactly it means to ‘parse’ an L2. It is plausible that learners, especially at initial stages, may be able to deduce enough pragmatic and semantic meaning to ‘understand’ L2 utterances without needing to fully parse them. As will be outlined in chapter 3, it has been suggested that L2 learners compute qualitatively different parses compared to native speakers. It is not clear what impact this would have on the FT/FA model. It would be plausible to assume that, contra the Full Access predictions, non-target parsing routines would predict that learners may never arrive at a fully target representation of the L2.

restricted experience of the target language input. Especially in the case of instructed learners, it is not enough to assume that the general distribution of particular properties in the target language will be reflected in the input to which instructed learners are exposed. In any case, 'obscure' and 'complex' are problematic and it is not clear how they should be applied to input data. Even 'rare' in this context poses some problems as it is not generally clear how frequent a trigger must be in order to motivate parameter (re)setting. On the Schwartz & Sprouse model, it might even be posited that a relatively rare occurrence of structural cues would lead to parameter resetting. For example, on the assumption that L1 German learners of L2 English start out with a V2 grammar, any instances of V3 in the input would presumably trigger resetting from V2 to V3. The continued residual transfer of V2 would be difficult to account for. One might propose that frequent SVO order in English would reinforce an L1 German speaker's V2 grammar and thus make it difficult to reset to a V3 setting. However, there would be ample evidence from fronted constituents, and presumably from adverb and negation placement to motivate a quick resetting to V3. For this sort of issue, Schwartz & Sprouse can propose that the interaction of the L1 representation, UG and the target language input may lead learners to form a non-target representation which is subsequently difficult to lose.

For example, in their analysis of the production of Cevdet, an L1 Turkish speaker acquiring L2 German mainly in a naturalistic way, they (Schwartz & Sprouse 1994, 1996) argue that the initial state appears to be the same as Turkish, the setting of the V2 parameter proceeds in stages characterised by the production of XSV, XVS_{PRO}, and finally target-like XVS, with continued optional production of XSV. This is analysed as involving UG-sanctioned options for the checking of nominative case, rather than involving target German representations involving verb movement to C (cf. Schwartz & Sprouse 1994: 344-346). The salient point is that the continued optionality of XSV at the final stage studied, after surface V2 is often produced in a target-like way, is based on the fact that adjunction to CP is transferred from Turkish as the fronting mechanism and there is no evidence available in the input which might force a restructuring of this mechanism (on the assumption that negative evidence is either not available or not effective if it is). Thus the lack of consistent parameter resetting is essentially due to the nature of the initial state being the L1 system and the lack of relevant evidence in the

input.¹³ The lack of consistent clustering of parametric options is accounted for by the fact that “Cevdet’s interlanguage changes to accommodate more German PLD [primary linguistic data], not in order to match the parametric values of native German” (Schwartz & Sprouse 1994: 340). If the V2 parameter itself is not being reset, then it is unsurprising that the surface manifestations of this parameter are not in evidence. While the specific analysis proposed for the Cevdet data seems to work, it is not clear how Full Transfer/Full Access can cope with other instances of optionality. It is not clear how L1 influence could plausibly give rise to both V2 and V3 in L1 German-L2 English interlanguage. This is discussed on the basis of the corpus and judgement data in Ch. 10.

2.3 No Parameter Resetting

It would seem that Full Transfer is the most successful theory of the initial state as it is the most conceptually well-founded and elegant as it does not require stipulations about transfer only affecting certain properties of the grammar or only specific projections or functional/lexical categories from the L1. However, the assumption that UG is available in L2A is not necessarily straightforward and it has been suggested that the lack of determinate parameter resetting in L2A is due to the fact that UG is no longer available after a Critical Period and so L2 learners must rely on different learning mechanisms. A wide range of positions on the possibility of parameter resetting have been adopted in the SLA literature. Ayouun (2003: 64) summarises the full gamut of hypotheses, which span the intermediate logical possibilities between the assumption that parameter resetting is impossible in L2A to assuming that parameter resetting is virtually unimpaired in L2A and may progress on the basis of parsing of the L2 input. A breakdown in the parameter system is assumed to some extent in different theories we have already encountered. For example, it has been proposed as an extension of the Valueless Features Hypothesis that the impairment to features is in fact more local and applies only to Tense features, but it is permanent (Beck’s 1998 Local Impairment Hypothesis). Thus for a surface pattern dependent on these grammatical features, such

¹³ Note that this implies that target V2 is essentially never acquired at all, as the V2 parameter involves double movement of a finite verbal element to C and topicalisation to Spec-CP. A consideration of the V-to-I movement parameter in SLA is not so easily captured on a Full Transfer/Full Access model (see below).

as verb-raising, there will be no parameter setting and the surface manifestations of the parameter will be permanently variable in the L2, without implicating L1 transfer.

Alternatively, it has been proposed that there is no parameter resetting possible *at all* and parametric options are only available through the L1 and target representations of new parametric options will never be acquired. The Failed Functional Features Hypothesis (Hawkins & Chan 1997; Hawkins 2005) and the Interpretability Hypothesis (Hawkins & Hattori 2006; Tsimpli & Dimitrakopoulou 2007) assume that uninterpretable features which are not selected in the L1 are inaccessible due to critical period effects and will therefore not be instantiated in the L2. On this account parameter resetting is impossible and new parameters which are not already available through the L1 will be impossible to acquire and learners must resort to some mechanism other than parameter setting to gain coverage of the L2 data (see Hawkins & Chan 1997 for alternative underlying representation for L1 Japanese learners of L2 English).

The models discussed above all assumed some level of access to UG; in what follows here, we review the strong position of no access to UG (e.g. Clahsen & Muysken 1986, 1989), which it is assumed is subject to Critical Period effects in its entirety and is no longer available as a process in adult SLA. It will be argued that the conceptualisation of UG in SLA can at times be rather vague and, furthermore, that extreme positions with regard to total UG access or no access at all are too strong and do not cover the essential empirical facts of L2A. As we have seen, there is no evidence of wild grammars in L2A but this need not be taken to indicate that UG and parameter resetting are at work in SLA. If UG-sanctioned grammars are the only possible hypotheses one can form of language, then it is unsurprising that all interlanguage grammars fall within this hypothesis space. A more satisfactory approach assumes that while UG plays a limited role in constraining the form of an interlanguage at any point in development, it is not available as part of a learning mechanism in L2A and so learning an L2 must involve a range of other cognitive processes distinct from the sort of UG-guided acquisition of a first language by children (Herschensohn 2000: 82).

2.3.1 The Fundamental Difference Hypothesis

As Chomsky (1997: 128, quoted in Bley-Vroman 2009: 180) observes:

“Like other kinds of growth, language acquisition happens easily at a certain age, but not later. There comes a time when the system doesn’t work any more. There are individual differences [...] but for most people, after adolescence, it becomes very hard. The system is just not working for some reason, so, you have to teach the language as something strange.”

This basic insight, i.e. that there is some fundamental difference between the process of acquiring first and second languages, has been outlined by a number of scholars (Bley-Vroman 1989, 1990, 1997, 2009; Clahsen & Muysken 1986, 1989; Schachter 1996; Herschensohn 1998, 2000). Nevertheless, Bley-Vroman’s (1989: 42) observation that such an apparently commonsense approach to L2A is by no means the dominant position in SLA research applies just as well today. Thus the central problems with which any theory of UG-based parameter resetting in L2A must contend are: the lack of clustering of properties associated with the setting of individual parameters and the lack of discrete stages of parameter resetting as the learner establishes the underlying parametric options of the L2. An implicit assumption of parameter (re)setting in L2 is that transformational learning is in operation, i.e. that learners move between discrete stages as parametric options are set. Yang (2002: 40) observes that for first language acquisition, the assumption of transformational learning is not tenable as it would require that the learner’s linguistic production should be consistent with respect to the grammar that is currently assumed and that abrupt changes in linguistic production should be in evidence as a learner moves from grammar to grammar. This is obviously even more problematic for L2A, where non-target variability and optionality possibly remain even at the end-state of L2A. There is a lack of evidence for clustering of the surface consequences of parametric options in L2A, Bley-Vroman (2009: 184) points out that “... in 20years of SLA research, not a single study has convincingly demonstrated the sort of triggering and clustering that might have been expected. Quite the opposite: Studies have uniformly showed that aspects of a parameter (i.e. the individual phenomena) are learned separately.”

We have already seen how UG-based theories such as FT/FA approach these empirical difficulties, by assuming that the influence of the L1 complicates matters and leads to

alternative representations for the input, from which a learner may not be able to retreat. In this way, optionality may become a permanent feature of even advanced second language learners' competence and production.

Since the Fundamental Difference Hypothesis assumes that UG does not drive L2A, the lack of clustering, etc. is to be expected. Bley-Vroman (1989) outlines nine ways in which the process and outcome of foreign language acquisition are fundamentally different from L1A, showing that it is unlikely that both acquisition scenarios could be driven by identical cognitive mechanisms, these are summarised below.

1. Lack of Success

While children learning their L1 inevitably converge on the target adult grammar, adult foreign language learners do not, which is characteristic of any general learning mechanism in fields for which no domain-specific cognitive facility exists. "Frequent lack of success in adults, against uniform success in children, is a serious obstacle to the view that the same process underlies child and adult language acquisition." (p. 44)

2. General Failure

There is the impression of "ineluctable success" in the case of L1A and "ineluctable failure" in L2A. "For a theory which holds that adult foreign language acquisition and child first language development are fundamentally different, this follows naturally. Language is not merely difficult to learn with only general cognitive strategies, it is virtually impossible" (p. 44).

3. Variation in success, course and strategy

There is substantial variation in ultimate attainment even when age, exposure and instruction are held constant. "[S]ubstantial variation among learners [...] is exactly what one expects to find in general adult skill acquisition." (p. 45)

4. Variation in goals

In addition to degree of attainment, there is variation in type of attainment. General problem solving requires the setting of goals which might involve different learning strategies. "Children, on the other hand, driven by the inexorable operation of the domain-specific language faculty do not have the luxury of setting their own goals." (p. 46)

5. Fossilization

L2 learners often permanently stabilize at a certain stage short of complete success and even conscious efforts to progress can not force improvement.

6. Indeterminate intuitions

Even very advanced L2 learners often lack determinate grammaticality judgements. This is unsurprising if an L2 system is “a relatively heterogeneous collection of strategies for achieving communicative goals: A system of rules generating all and only the sentences of language may even be absent.” (p. 47)

7. Importance of instruction

Instruction and controlled drill appear to have an important function in adult L2A, in the same way that it does for any general skill acquisition. It plays no role in L1A.

8. Negative evidence

While negative evidence may not be available for child L1 acquirers, and they certainly do not rely on it, “there is general agreement that negative evidence is at least sometimes useful, and sometimes, though not always necessary” for foreign language learning. (p. 48)

9. Role of affective factors

While child L1 development is uniform irrespective of personality, motivation or attitude, such factors are essential in foreign language learning.

So, given that there is compelling reason to believe that adult L2A shares many features with any general problem-solving or learning strategies, one might assume that UG is subject to maturational constraints and will no longer be active as a language-specific cognitive module after a specific point in development. However, as we have seen, the proponents of a UG approach can point to the fact that interlanguage grammars are apparently not “wild” in so far as they are always subject to UG-defined constraints, even if these are instantiated in neither the L1 nor the L2. How can each of these seemingly well-founded lines or argumentation be resolved?

2.4 Reconsidering Access to UG

A straightforward answer to the question above could be that it is based on a different understanding of what UG entails for each side in the pro- or anti-UG camp. For proponents of Full Access, the assumption is that UG is available as a discrete linguistic module which drives acquisition. For proponents of No Access, this language specific module is not available as a *learning mechanism*, but they concede that UG must be available to the extent that it constrains *the form* of L2 grammars. Herschensohn (2000: 188-189) observes that “[t]he process of L2A is UG constrained, *but it is not UG driven in the same way that L1A is...* L2ers are not driven in the same way, but they still show evidence of UG in both the fact that the interlanguage grammars are UG constrained and in the fact that the options chosen in the intermediate stages are limited, if not altogether systematic” (my emphasis). This is perhaps the most well-founded formulation of the role of UG. The form of any natural language or interlanguage will be constrained by UG principles and parameters, but this does not entail that the process of acquiring and L2 is the same as L1A. It is apparently not the case that the interaction of input and UG (with some added complications from the L1) drives the learning of an L2. As Bley-Vroman (1989) illustrates, given the obvious differences between L1A and L2A, the burden of proof must fall on those who propose that the same mechanisms underlie both processes. It is not at all clear that this burden of proof has been met.

White (2003b: 36) points out that UG is itself a theory of knowledge representations and not the process of acquisition. In order to explain how the representations are acquired, one needs recourse to learning principles, processing principles, etc. Given this distinction, the difference between a UG and a non-UG approach to L2A could therefore be confined to the availability of (rather vague) learning mechanisms dedicated specifically to linguistic learning and independent of general intelligence/learning in L1A before the critical period and the lack of such language-specific mechanisms in adult L2A.

Bley-Vroman (1989: 51-52) acknowledges that a great deal of information about UG is available through the L1; in particular, learners have knowledge of “the broad architectural features of language” through the L1. By this he means universals which state that the foreign language will have a syntax, semantics, a lexicon, a morphology, a

phonology, etc. (Bley-Vroman 1989: 51). So the learner will come to the job of acquiring an L2 furnished with the assumption that the foreign language is a fundamentally similar entity as the L1, even though the language-specific learning mechanism furnished by UG is not functioning. White (2003b: 27) notes that since the L1 is a natural language subject to constraints of UG, one must assume that an L2 representation based on the L1 is constrained by UG.

Clahsen & Muysken (1986, 1989) similarly propose that the difference between L1A and L2A is that the language acquisition device (LAD) is active in L1A and specific linguistic learning is possible *in addition to* the development of general cognitive learning strategies. However, the LAD is subject to maturational constraints and is no longer available beyond childhood. Adults must therefore rely exclusively on general learning principles and cannot acquire a second language in the effortless and complete fashion of an L1. They have subsequently clarified that they see L1A and L2A both as the result of the interplay of UG and non-UG factors: “It is implausible that all of L1 development is UG-driven, since it is embedded in a highly intricate process of general cognitive development, involving all kinds of learning” (Clahsen & Muysken 1996: 722). Thus, the difficulty resides in the fact that adult language learners cannot use only UG based mechanisms but must rely also on general problem solving strategies to acquire the L2.

Bley-Vroman (2009) provides a radical analysis of the consequences of developments in linguistic theory for the Fundamental Difference Hypothesis and for SLA research more generally and observes that issues of access to UG are in essence vitiated under current theoretical assumptions. He notes that trends in contemporary linguistic theory, both generative and constructionist in flavour, have moved towards a conceptualisation of the language faculty as lacking any rich innate structure (Bley-Vroman 2009: 182-184). Rather, Minimalist theory sees the language faculty as a more streamlined mapping between interfaces than previous incarnations of Chomskyan P & P theory. Minimalism posits simply that morpholexical items from the lexicon can be recursively combined and displaced in narrow syntax and “all of what was previously accounted for by the elaborate domain-specific (sub)systems of rich UG can be accounted for by the interaction of this recursive system with meaning, on the one hand, and linearized

physical expression, on the other” (Bley-Vroman 2009: 182). Seen from this theoretical perspective, “[t]he empirical content of full transfer/full access virtually disappears under strong Minimalism, because full access reduces to taking the target language to be a human language” (Bley-Vroman 2009: 183). If the structure of UG can be reduced to simply the combinatory machinery of narrow syntax, all second language learners have access to UG to the extent that second languages are natural languages formed by recursively combining morpholexical items.

Other theoretical innovations have had important repercussions for the FDH. If Chomsky (2004: 124, quoted in Bley-Vroman 2009: 186) is correct that elements previously thought to be peculiar to the language faculty are in fact “recruited from or used of other functions” then the FDH’s distinction between language-specific learning mechanisms and domain-general learning no longer applies. Bley-Vroman (2009) suggests that the difference between L1A and L2A can be captured by assuming that processing routines and patches, both of which are part of the language faculty and used in L1A are relied on *more extensively*, or even exclusively, in L2A.

So, the issue of fundamental difference shifts from one of access to UG to one of the extent to which different mechanisms are relied upon in first and second language acquisition.¹⁴ As an example, Bley-Vroman (2009: 191) refers to the Declarative/Procedural Model of Ullman (2001a & b, 2004, 2005, 2006) and this takes over a great deal of the explanatory burden from the previous access to UG argument. The D/P model proposes a neurological basis for the usual distinction made in linguistics between the lexicon and the grammar. Declarative Memory underlies semantic and episodic knowledge in general and for language it stores individual lexical items such as specific lexical items as well as bound morphemes and idioms or chunks. Information stored in Declarative Memory may be consciously recollected. By contrast, Procedural Memory, which is associated with the learning and control of motor and cognitive skills, is not subject to explicit learning and not accessible to conscious memory. This system underlies the implicit (L1) learning and use of grammar,

¹⁴ I will persist with using “access to UG” as a convenient shorthand for the different positions usually adopted in the literature. This may be read in different ways in the light of Bley-Vroman’s (2009) recent reconsideration of the FDH.

including syntax, non-lexical semantics, morphology and phonology (Ullman 2001: 107). Each of these systems is associated with a different neurological system.

The commonplace observation that learning an L2 with late exposure is subject to non-convergence is explained by the fact that the procedural neurological system is subject to critical period effects (Ullman 2001: 108). By contrast, the functioning of the declarative system actually improves through childhood. Thus, when we come to learn a foreign language after childhood, there is a greater reliance on the declarative system. This explains why it is difficult to learn the grammar of a second language while learning a list of lexical items in a foreign language is relatively straightforward. Also, as the declarative system is accessible to conscious retrieval, explicitly learned rules for an L2 may be accessed and consciously applied. Ullman (2001: 109) observes that this sort of phenomenon has also been observed in sufferers of specific language impairment. We will leave aside the details of the neurolinguistic studies on which Ullman bases this model and return to what this model predicts in terms of the linguistic productions of L2 learners. Ullman (2006: 99) himself proposes that learners may depend on “stored schemas or constructions” and the application of “rules” learned in declarative memory.

2.5 Constructionist Approaches to SLA

What I am taking here to be “constructionist” approaches to SLA are those which posit, as Ullman does that there is a reliance on constructions or stored chunks in L2A rather than an on the implicit learning of L2 grammatical properties. This should not be taken as Construction Grammar applied to SLA (see below). Many approaches which traditionally assumed “no access” to UG posit this sort of mechanism, for instance Clahsen & Muysken (1986: 113) suggest that adult learners of L2 German adopt SVO order based on “canonical sentence schemas” which are the most frequent and neutral order in the input. Similarly, Bley-Vroman (1997) proposes a system of pattern-matching based on specific constructions which he expresses as simplified phrase structure notation (see below for more details on how this sort of mechanism proceeds).

Rather confusingly, while Herschensohn calls her approach “Constructionism” she does not invoke constructions or pattern-matching as *the* mechanism by which L2A proceeds. Herschensohn’s (1998, 2000) constructionist proposal depends on a Minimalist view of the language faculty, whereby core syntax is essentially invariant cross-linguistically and the surface peculiarities of individual languages reside in morpholexical differences. It is therefore assumed that “L2 learning is substantially a matter of vocabulary and morphology acquisition with a progressive fleshing out of [+/- interpretable] features to gain the correct value for a given parameter” (Herschensohn 2000: 109). Parameter resetting cannot therefore be an all or nothing phenomenon but proceeds gradually construction-by-construction as learners establish in a piecemeal fashion the behaviour of specific morphological and lexical elements in the L2. This differs from the Bley-Vroman type approach in that there is less appeal made to specific constructions per se. The differences are, however, mainly notational and the basic conceptual ideas are more or less the same. For example, on the role of input frequency, Herschensohn (2000: 81) notes that because L2 learners must gradually acquire control of morpholexical constructions, incompleteness is more likely, and may prove to be permanent, with peripheral morpholexical items while core lexical items are expected to be relatively unproblematic for learners. She shows for example, that for Anglophone learners of L2 French, verb placement relative to the core negator *pas*, is acquired quite quickly and completely while there is an extended period of variability with the less frequent negator *jamais* (Herschensohn 1998).

Bley-Vroman notes that even mainstream parameter resetting approaches to SLA occasionally fall back on a pattern-matching mechanism to explain some problematic empirical fact. He cites Schwartz & Gubala-Ryzak (1992) and White (1992), who both note that White’s adverb placement data seems to indicate that there is a certain amount of “pattern-matching” occurring (Bley-Vroman 1997: 3). Of course, it is only to be expected that second language learners will have recourse to a coalition of factors and learning mechanisms, just as Clahsen & Muysken (1996) suggested that children acquiring the L1 will also make some use of general cognitive capacities which are not domain-specific to language. As is clear from above, for Schwartz and White, associative pattern-matching is at best only a peripheral phenomenon in L2A and for them, parameter setting, though complicated by the presence of the full L1 grammar, is

still available to second language learners. Bley-Vroman (1997: 3) suggests that far from being an isolated element in SLA, for second language learning, constructions are “the stuff of acquisition.” Given that the parameter setting properties of UG are unavailable, second language learners must proceed in an inductive fashion, progressively adding constructions to their L2 grammar rather than deductively creating an abstract grammar with parametric options intact.

At this point, we should clarify what is meant, or more precisely what is not meant, by ‘constructionist’ in this context. ‘Construction’ should not be taken to equate with a Construction Grammar theoretic approach to language (cf. Goldberg 2006). Bley-Vroman makes reference to Construction Grammar and admits a place for constructions in native languages but he notes that the fundamental difference is that constructionist learning is active in L2A but *not*, or at least not to the same extent, in L1A, and a native language is not simply a collection of constructions (Bley-Vroman 1997: 2). By contrast, Goldberg (2006: 18) notes that “what makes a theory that allows constructions to exist a “construction-based theory” is that the network of constructions captures our grammatical knowledge of language *in toto*, i.e. **it’s constructions all the way down.**” (emphasis in original). The proposal developed here is therefore not necessarily a “construction-based theory” in Goldberg’s sense in so far as it assumes that constructions are resorted to in L2A while L1A is the result of the interaction of UG and the input and not purely construction based.

Construction Grammar, or usage-based models, as theoretical or descriptive tools have not been applied to L2A to the same extent as L1A (Haberzettl 2006: 55). One can identify points of similarity between a CG approach and a constructionist approach as it can be assumed that learners progress “from formulas via low-scope patterns to fully abstract schemas” (Eskildsen 2009: 336). However, the aetiology of this sort of progression is far from clear-cut in L2A. Myles et al (1998: 328) point out that many studies have documented that formulaic units can apparently persist in an L2 grammar even after it appears that they have already been analysed into their constituent parts. The same mechanism obviously pertains also in L1A, with the distinction that formulaic units in a native language will, from a generative perspective, be confined to peripheral idiomatic utterances, unlike the more extensive reliance on such formulae in L2A.

However, making any reference to formulaic language opens up a conceptual and terminological can of worms. Eskildsen (2009: 337) refers to earlier work by Wray & Perkins (2000) which found that over 40 terms have been used for the formulaic language phenomenon and he notes that this has resulted in a “terminologically handicapped field.” The areas of interest touching on formulaic language cover phraseology (e.g. papers in Meunier & Granger 2008), but also apply to the role of formulaic chunks in the development of an L2 grammar. That is, the questions of if, how and when formulaic sequences might be unpicked and be available for grammar construction, and the questions of how this process drives overall grammatical development (see Myles et al 1998, 1999). Furthermore, it seems possible to differentiate between formulaic language research in SLA and more general usage-based theories of language acquisition, which also rely to some extent on the establishment of utterance schemas on the basis of formulaic chunks (see Eskildsen & Cadierno 2007; Eskildsen 2009 for usage-based linguistics approach to L2A).

Despite the complexity and terminological confusion in the field, a basic assumption common to most approaches (at least those which posit a role for constructions in the overall development of the grammar rather than just as the acquisition of L2 phraseological units) is the progression outlined above from fully formulaic chunks to utterance schemas based on these but with certain open slots to fully abstract constructions. The constructionist approach below agrees in spirit with this.

2.5.1 How Constructionist SLA Works: Input, Frequency, Salience and Noticing

An example from Bley-Vroman serves to illustrate how the proposed model works and pre-empts likely criticisms. The proposed mechanism is that a learner will add a construction to the grammar only if it is encountered in the input or if it is available in the L1. Recall that the Fundamental Difference Hypothesis assumes that in the absence of UG, the L1 serves to guide an L2er’s assumptions about what the target language is like, in effect Full Transfer at the initial state. Thus if a surface pattern is encountered in the input, it may be added to the grammar, and if this pattern corresponds to an identical L1 structure, the process is especially straightforward (Bley-Vroman 1997: 5).

It is proposed further that construction acquisition is a specific instance of the general human capacity for cognitive categorisation. This accounts for the fact that learners may “go beyond the input” and produce utterances for which there is neither evidence in the input, nor the possibility of transfer from the L1. This pre-empts possible criticism from proponents of UG-based SLA as it explains why learners may be creative in the L2 and are not confined solely to surface patterns they encounter in the input or which are available from the L1. Bley-Vroman cites the example of L1 Hebrew learners of L2 English who produce subject-auxiliary inversion in embedded *wh*-interrogatives Ex. (2.1). There is no evidence for this in the target language input and Hebrew does not have embedded inverted interrogatives.

(2.1) I wonder what did she eat.

This can be accounted for by a simple distinction between 1) question constructions, which are prototypically inverted, and 2) sentence constructions which may be either embedded or main clauses. The learners who produce (2.1) make the link in this instance to the question construction and thus produce inversion. In this way, the learner has established that *wh*-interrogatives may be embedded and that interrogatives are prototypically inverted. These links to constructions interact to lead to the production of embedded SAI. Similarly, the data from Cevdet, which Schwartz & Spouse also examined, can be accounted for in Bley-Vroman’s scheme (1997: 12-13). Recall that Cevdet produced ungrammatical V3 structures in German and went through a period where he produced grammatical V2 inversion, but only pronominal subjects tended to invert while full NPs continued to occur in non-target V3 XSV structures. As with the embedded question phenomenon in L2 English, the following possible constructions may have been established by Cevdet: 1) S(entence), 2) S_{pronom}, 3) Adv S, 4) Adv S_{INV}. Again the interaction of these constructions explains the production data, (3) and (4) allow adverbial fronting either with or without inversion. (2) is a sub-type of sentence with a pronominal subject. Having established (2) as a subtype of sentence, the nature of inversion with pronouns is due to (2) being linked to (4).

Similarly, Haberzettl (2005, 2006) has shown that for the acquisition of German verb placement, there are specific construction sequences in evidence. She studied L1

Turkish children acquiring German and found that certain constructions for which there is neither evidence in the input nor transfer from the L1 are consistently produced, this is particularly the case with forms of *sein* (to be) occurring in non-target sequences. For example, there is evidence for the overuse of the third person form of ‘to be’ together with lexical verbs which is not a target form, as in “die Kinder ist so gemacht” (Haberzettl 2006: 63). The various instantiations of the “Ist-Konstruktion” cannot be based on repetition of whole constructions heard in the input, but rather the children have extracted individual building blocks from frequent constructions which can be recombined in novel ways to form new constructions in their L2 (Haberzettl 2006: 65-66). It is suggested that this is the result of combining a copula construction N-*ist*-N with a construction which gives the order of verbs and nouns as NV, resulting in N-*ist*-N-V. The establishment of each of these individual constructions is motivated by the frequency of occurrence of utterances with the copula. NV orders are also frequent in German in subordinate clauses or periphrastic tenses. This might be particularly salient for L1 Turkish speakers as Turkish is an OV language (Haberzettl 2006: 66).

Even though Haberzettl does not make use of Bley-Vroman’s analysis, her proposed explanation supports the theoretical foundation of the Bley-Vroman constructionist approach. Of central importance is the concept of ‘noticing’ (Schmidt 1990, 1992), which refines the notion of a structure or trigger being ‘available in the input.’ It is not enough for a learner simply to encounter or be exposed to specific structures or triggers in the in the input, rather the acquisition of a particular property, or construction depends on it being *noticed* in the input. Thus a learner must be able to parse and understand a particular linguistic structure and notice the relevant properties associated with it in order to be able to add a construction to her grammar. “In essence, what is not noticed is not learned” (Bley-Vroman 1997: 14), given the difficulty L2 learners may have in parsing and understanding target language utterances, it is then unsurprising that various aspects of the L2 may remain opaque to the learner. It is clear from the Haberzettl data that the children have noticed NV and N-*ist*-N and established these as individual constructions even though they will normally be embedded in a more extensive linguistic context in the input.

As different learners will notice different things at different times, this provides an account of individual differences in SLA and for variability in learner populations. However, the concept still remains vague until allied to notions of prototypicality, frequency and salience in the input. It is reasonable to expect that those constructions which occur most frequently in the input will be noticed more readily than rare or marked structures and assumed to be the core, prototypical instance of the given type of construction (again cf. Habermehl's data). The influence of frequency effects on L2 linguistic development is, it should be emphasised, not peculiar to a constructionist or no-UG approach. Schwartz & Sproule (1994) make extensive use of frequency as an explanatory device for the stages through which Cevdet passes. It is obvious that frequency and salience will play a role in language acquisition, the crucial distinction is whether this might be as a trigger for a deductive setting of an abstract grammatical property or in encouraging a learner to add a frequent construction to their linguistic capacity in the L2.

It should, however, also be noted that issues such as frequency in the input is virtually impossible to pin down in practise. On the basis of large language corpora it is relatively straightforward to provide counts of the frequency of certain structures in a language, but this is not really informative for SLA studies. What is of central importance is *the input that the learner is exposed to*, and this will inevitably vary widely depending on the learning context. Bley-Vroman (1997: 13) makes a similar point when he proposes a possible explanation for the source of Cevdet's tendency to only invert pronouns. It is noted that it is likely that most examples of inversion in the input Cevdet receives might be in main-clause questions in interactional settings, where interlocutors pose questions to Cevdet with inverted pronouns referring to Cevdet himself or co-workers or fellow students in German class, and therefore this high-frequency construction is more likely to be noticed and added to Cevdet's knowledge of constructions. At this stage it is tied to the specific lexical instantiation of interrogatives. This seems plausible but cannot go beyond conjecture. However, as will be argued below, looking at the explicit grammar instruction that tutored learners receive provides a way to at least approach the issue in a principled fashion. It would seem obvious that what is encountered most in the input and therefore what might be noticed are constructions which receive special attention in language classrooms.

Frequency in addition to markedness will also play a role in the establishment of prototypical structures. A construction which occurs most frequently and is neutral, i.e. without being associated with any specific, marked discourse-pragmatic force, is likely to be taken as the prototypical instance of a construction. This then has further implications in establishing the relative strength of constructions, e.g. the case of inverted embedded interrogatives is predicated on the assumption that inverted interrogatives are prototypical and therefore also applied to embedded contexts. Frequency may thus affect the “weight” of a construction (Bley-Vroman 1997: 10). Together with noticing, this accounts for fact that there are significant individual differences in the path and outcome of L2A as different learners will notice different things and establish different strengths for constructions. Optionality is also accounted for by the same mechanism. A learner may for example have a prototypical construction such as $S_{(UNINV)}$ but also subsidiary constructions which allow adverbial fronting linked to either the prototypical uninverted sentence, or to a subsidiary inverted sentence construction $Adv-S_{INV}$. Both may be produced by the same learner without giving rise to any significant theoretical or empirical difficulties for the model in the same way that it does for a parameter setting model (Bley-Vroman 1997: 10).

2.6 Summary

This chapter has explored theories of transfer and optionality at the initial state of L2A and the process of subsequent grammar restructuring. It has been suggested that any model that assumes less than full transfer of the L1 at the initial state is not tenable and thus that the L1 grammar in its entirety most likely constitutes the initial state in L2A. The issue of subsequent grammatical restructuring during L2 development is more controversial and is connected to issues of whether or not parameter setting and the functioning of a language-specific learning mechanism are still available in L2A in the same way as L1A. Alternatively, theories of “fundamental difference” propose that the obvious differences in the process and outcome of L1A and L2A must suggest that second language learners rely on general learning mechanisms other than parameter setting. However, even those approaches which claim that UG is unavailable or that parameter resetting is impossible can not be taken to indicate that UG is totally

inoperable. UG must be operable at least as a constraint on the local *form* of grammar as no learners formulate 'wild' knowledge representations of the L2 which contravene UG principles.

In terms of concrete predictions for the L1 German-L2 English scenario, each main proposal makes explicit predictions. The Full Transfer/Full Access model, which is the most credible parameter setting model, predicts that there may be some difficulty resetting the V2 constraint, as a large proportion of English input is made up of SVO sequences which can be parsed by a V2 grammar and so will not trigger restructuring. However, one must assume that by advanced stages of acquisition, the V2 parameter will have been definitively reset as a number of structures with V3 in the input will presumably motivate parameter resetting. Alternatively, one must be able to formulate a UG-sanctioned parametric system which can account for the occurrence of surface transfer and optionality in terms of a consistent underlying syntactic representation.

The constructionist approach proposes on the other hand that the restructuring of a V2 grammar will proceed in a piecemeal fashion and that it will show frequency effects whereby particular structural or lexical instantiations of V3 will be put in place quickly and that transfer of V2 might persist with other. Optionality and a lack of success is to be expected as the lack of parameter resetting means that there should be no connection between the different surface patterns which are the result of underlying parameters. Based on surface patterns in the input, learners should be able to establish prototypical sentence schemas, however, continued non-target or L1 patterns may persist. A parameter setting model will predict that there is no bar per se to L2 learners ultimately gaining complete native-like mastery of the L2 grammar.

3 Transfer and Optionality at the Interfaces

In the previous chapter we saw how verb movement and V2 evidence has provided the foundation for many of the hypotheses of transfer at the initial state in L2A and in discussions of subsequent parameter resetting and grammatical restructuring. There has, however, been growing interest recently in the nature of advanced or near-native syntactic competence in generative SLA research. To date, evidence from verb placement has not been explored to the same extent in this trend of research as it has in parameter resetting research. This chapter therefore situates the research to be presented here against the background of research on residual optionality in advanced L2A (see e.g. Sorace 2003).

The Interface Hypothesis might initially seem superfluous to a consideration of transfer and optionality with V2 as this, like thematic verb raising to I, is normally assumed to be a purely syntactic head movement operation. As we have seen, however, it has been suggested that the V2 phenomenon can be accounted for by properties at the interfaces of syntax with discourse-pragmatics and information structure (cf. the classic analyses which invoke topicalisation, and Frey's 2006 Split-CP analysis). Furthermore, as discussed in Chapter 1, while the comparative distinctions between German and English with regard to verb movement are clear and straightforward, the differences with regard to V2 are not as clear-cut as English instantiates a mixed V2 system which is linked to the interfaces, i.e. lexical-semantics and discourse-pragmatics. As a consequence, it might be expected that the narrow syntactic components of L2 English, i.e. the lack of thematic verb movement, will be more quickly and completely acquired, while the transfer of V2 in interface contexts, i.e. after topicalisation, might continue to be in evidence. This may account for the optionality of continued transfer as it suggests that optionality affects only the interfaces and so constrains its occurrence.

3.1 Clarifying the Notion of Interface

Before embarking on a consideration of some of the issues connected to the Interface Hypothesis which are relevant for the present study, a brief overview of some general theoretical and empirical issues is in order. The notion of interface may mean different things in different theoretical approaches and depending on what modules of the grammar are thought to interface with each other (see papers in Ramchand and Reiss 2007 for theoretical overview). In a Minimalist model, the narrow syntactic computational machinery must interface simply with systems of mind which permit production and comprehension of language, thus with Phonological Form and Logical Form.

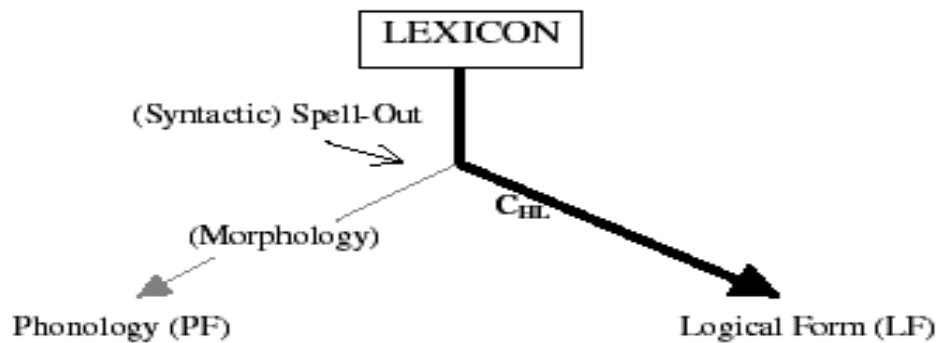


Figure 3.1: The Minimalist Model of Grammar

Reinhart (2006) sees the sensory-motor systems as just one of several mental systems, all of which interface with the syntactic computational system. The goal of linguistic theory should be to reconstruct the system which makes possible the interface of the various cognitive systems (Reinhart 2006: 2).

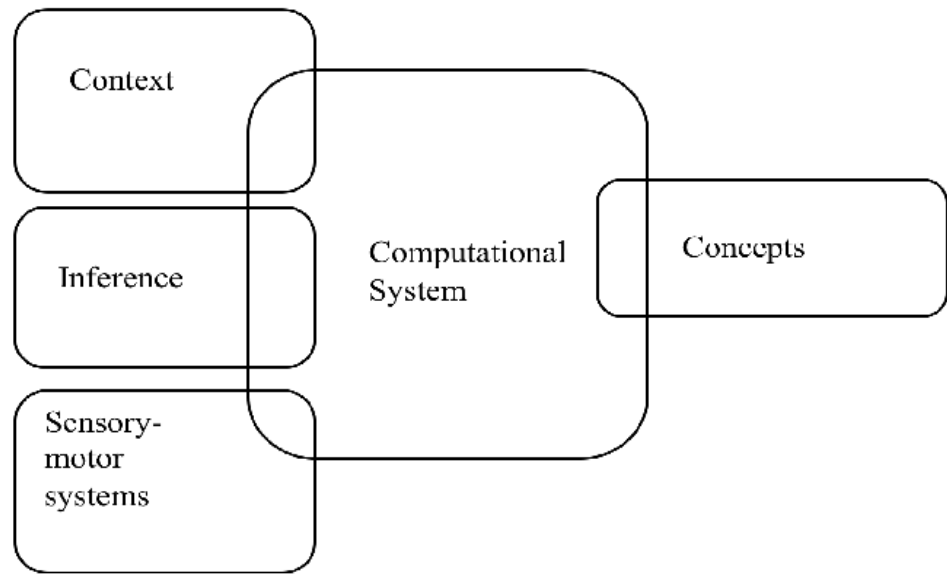


Figure 3.2: Reinhart's (2006: 3) Model of Interfaces

Jackendoff (2002: 111) proposes that “language comprises a number of independent combinatorial systems, which are aligned with each other by means of a collection of interface systems.” Thus a range of mental systems and specific linguistic modules must interface with each other in a range of ways.

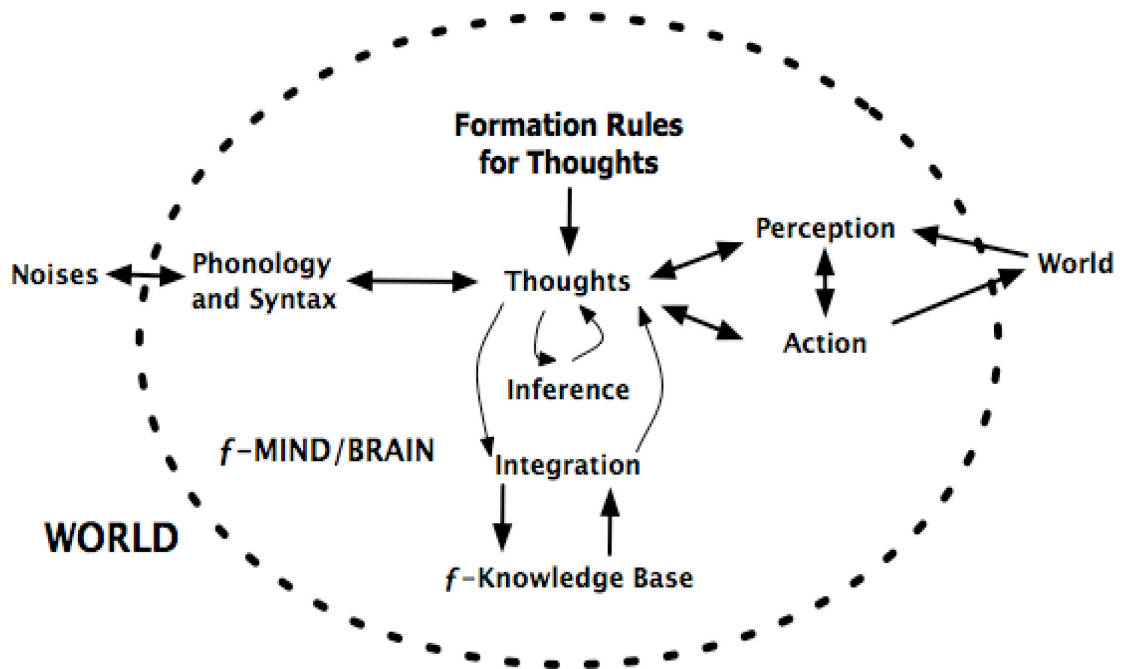


Figure 3.3: Jackendoff's (2002: 305) “Conceptualist View” of Language

Thus the precise conceptualisation of an interface in linguistic theory is the subject of some variation in different theoretical models. SLA researchers have not adopted a particular interface model from theorists but rely on the whole on interfaces between traditional descriptive modules of the grammar, usually syntax with one or more of discourse-pragmatics, morphology, phonology, semantics. One theoretical distinction which has been drawn in SLA studies is between ‘internal’ and ‘external’ interfaces (Tsimpli & Sorace 2006). This draws on the Minimalist model in which semantics, i.e. Logical Form, involves formal features internal to the syntactic computation. Discourse is then an external interface which involves pragmatics and contextual information external to the grammar. Tsimpli & Sorace (2006) propose that the internal interface may be more easily acquired while the external syntax-discourse interface is subject to residual optionality. However, this distinction is not necessarily robust and should not be taken to indicate that syntax-semantics is *inevitably* unproblematic while syntax-discourse is *inevitably* subject to optionality. A number of studies have addressed this issue and support the full range of logically possible results, i.e. successful acquisition of the internal interface (Dekydspotter & Hathorn 2005 *inter alia*); optionality at the internal interface (Guijarro-Fuentes & Marinis 2007 *inter alia*); successful acquisition of the external interface (Rothman 2009 *inter alia*); optionality at the external interface (Belletti et al 2007, *inter alia*).

It is not clear where this leaves the internal-external interface distinction. While below we discuss a strong version of the interface hypothesis, which predicts that syntax-discourse interface properties are persistently problematic at ultimate attainment, it is perhaps more realistic to hold a more differentiated view based on the specific L1-L2 pairings and the type of interface properties under investigation. Despite these caveats, the theory makes clear predictions about developmental sequences, which can be applied fruitfully to the higher-intermediate/advanced learners in the present study. Irrespective of whether or not interface properties might *ultimately* be successfully acquired, it is to be expected that the narrow syntactic properties of an L2 will be acquired more straightforwardly than interface properties. Without necessarily assuming that interface properties will be permanently problematic, it must be hypothesised on the basis of the Interface Hypothesis that they will at least show evidence of delayed acquisition.

3.2 The Interface Hypothesis in SLA

In research over the past decade or so, Sorace (1993, 1999, 2003, 2004, 2005, 2006a) has shown that optionality is not just a feature of transitional periods in L2A, but that it is present even at the level of ultimate attainment of very competent L2 speakers. Even where very proficient L2 learners would seem to have mastered the TL grammar, and could be described as having “near-native” ability in their second language, it appears that their performance and underlying competence are characterised by optionality which is not typical of the native speaker’s grammar. It has further been claimed that this optionality affects *only* the interfaces of syntax with other cognitive modules (Sorace 2006a: 116). “The Interface Hypothesis” can be defined as the generalization that “narrow syntactic properties are completely acquirable in a second language, even though they may exhibit significant developmental delays, whereas interface properties involving syntax and another cognitive domain may not be fully acquirable” (Sorace and Filiaci 2006: 340).

This line of investigation has studied the use of pronominal subjects in the L2 acquisition of a pro-drop language as a “privileged” area of research on the syntax-discourse interface (Belletti et al 2007: 661). As such, this is explored in some detail in what follows as the fullest interface accounts in SLA have been developed for this specific linguistic phenomenon. Other detailed proposals, however, have of course been made for interface accounts of different linguistic phenomena implicating other modules of grammar (on syntax-morphology see Lardiere 1998b, 2000, Prévost & White 2001 a & b; on syntax-lexicon see Montrul 2000, Sorace 1993; for syntax-semantics see Slabakova & Montrul 2003, Montrul & Slabakova 2003; on the interaction of various interfaces in word order variation in L2A see Lozano and Mendikoetxea 2008a & b, 2009).

In this way, interface optionality and explanations for grammatical divergences between native and near-native grammars have moved centre stage in the study of ultimate attainment in syntax. What is specifically of interest in terms of ultimate attainment is “residual optionality”, which Sorace (2000: 98) characterises as follows:

“...the pattern of preferences for one option over the other changes over time, until a potentially permanent stage is reached at which the target option is strongly, but not categorically preferred, and the dispreferred non-target option is never completely expunged, but still surfaces in some circumstances.”

Thus the way residual optionality is to be understood is as an advanced L2 learner’s grammar continuing to license non-native structures, giving rise to differences, albeit extremely rare, in production and competence, alongside accurate target forms. Sorace (1993: 24) points out that near-native speakers’ production can in fact often mask competence differences between them and monolingual native speakers of the target language. On the basis of auxiliary selection by L1 English and French near-native speakers of L2 Italian, she shows that while both L1 groups in her study can pass as near-native speakers of Italian, the English group seems to have an “incomplete” grammatical representation of unaccusativity in Italian, and the French have a “divergent” representation.¹⁵ This is illustrated by the fact that the English speakers seem to have indeterminate grammaticality judgements of auxiliary selection in different syntactic contexts while the French display determinate judgements, which nonetheless diverge from native Italians’. The relevant point is that it seems that the syntactic reflexes of unaccusativity are the problem, i.e. the interface between syntax and the lexicon has still not been fully mastered by these groups of learners.

A further important factor usually assumed in the Interface Hypothesis is that residual optionality, whether its source is incomplete or divergent grammatical knowledge, involves not just non-mastery of the interfaces but also the continued influence of the L1. So for auxiliary selection in L2 Italian, the differences between French and English learners’ competence are also conditioned by the different representations of unaccusativity in their respective L1s (Sorace 1993: 44). The definition of “residual optionality” offered above, as a particular pattern of preferences over time, can now be further refined as below, again drawing on Sorace’s words (2006a: 111-112):

¹⁵ The divergent vs. incomplete dichotomy is not entirely straightforward. White (2003a: 262-263) points out that it is possible that the English learners’ representations simply tolerate a type of optionality in auxiliary selection that is not instantiated by the French learners or the native Italian controls. The divergent/incomplete distinction is not of any major importance for present purposes and is not discussed here further.

“One of the characteristics of L2 advanced grammars... is residual optionality, that is unsystematic L1 effects surfacing in the L2 speakers’ production.”

A further empirical example of the Interface Hypothesis in action will serve as illustration of how the L1 seems to influence the L2 grammar at the interfaces even at near-native levels of acquisition. The examples here are taken from Sorace (2005, 2006a), and refer to the syntax-discourse interface. Consider the Italian data in Ex. (3.1) (from Sorace 2005: 59-61; 2006a: 112-114).

- (3.1) a. Perche Maria e andata via?
why Maria is gone away?
- b. (perche) lei ha trovato un altro lavoro.
(because) she has found another job.
- c. (perche) ____ ha trovato un altro lavoro.
(because) has found another job.

Sorace argues that, in these examples, the response in (3.1b) would be typical of L1 English speakers of L2 Italian, even at near-native stages of acquisition, where they optionally realise the subject overtly whereas a native speaker of Italian would more naturally produce (3.1c) with a null subject pronoun. A similar pattern can be observed for the position of the subject in relation to the verb in Ex. (3.2).

- (3.2) a. Che cosa e successo?
What happened?
- b. Gianni e partito
Gianni be-3s left.
- c. E partito Gianni.
Is-3s left Gianni.

Again, according to Sorace, the answer in (3.2b) would be characteristic of an L1 English learner of Italian, where the subject is optionally realised in preverbal position. In native Italian, the natural placement in response to this sort of all-focus question would be postverbal. The relevant point is that the null-subject parameter syntactically

licences null and post-verbal subjects, but the distribution of these forms in discourse is regulated by the discourse-pragmatics interface. Sorace (2006a: 113) notes that there is a striking asymmetry in the sort of pattern observed with advanced L1 English learners of Italian with regard to these phenomena. As illustrated, they may optionally produce overt subject pronouns and preverbal subject pronouns in those contexts where native Italian would require null or postverbal subjects. However, it is claimed that the reverse does not hold, English learners of Italian are not known to overgeneralize in the opposite direction, i.e. they do not produce null subjects and postverbal subjects in pragmatically inappropriate contexts where an overt or pre-verbal pronoun would be required (although see Rothman 2009, discussed below). The fact that these pro-drop options, which are also not instantiated in English, are seemingly mastered, leads Sorace (2006a: 113) to conclude that “these speakers therefore have acquired a null-subject grammar. The optionality in their grammar does not affect the syntactic licensing of null subjects, but is at the level of discourse conditions on the distribution of pronominals and on the placement of subjects.” This could be localised in the underspecification of specific features which regulate pronoun placement such as [+Topic-shift] and [+Focus]. Topic-shift contexts would require an overt pronoun, while focus contexts have null pronouns in native Italian.

Sorace (2006a: 106) claims that evidence of this sort shows that residual optionality “occurs *only* in the interface areas of the competence of near-native speakers” (my emphasis). As we have discussed, it is a strong claim to propose that optionality affects “only” the interfaces at near-native levels of acquisition. We will return to this again below, but for now it suffices to say that it seems to be at least empirically sustainable on the basis of evidence from subject pronoun distribution to claim that interface knowledge is at least more difficult to acquire in a second language. The results for subject pronouns seem particularly robust given the wealth of research on this area in SLA and a range of other developmental scenarios (see e.g. Belletti et al 2007; Lozano 2009; Margaza & Bel 2006; Serratrice et al 2004; Sorace et al 2009; Tsimpli et al 2004). This general observation is captured in a more formal way by the definition of narrow versus interface syntax proposed by Sorace (2006a: 116) in (3.3) below.

(3.3) ‘Narrow’ versus ‘Interface’ syntax:

- Non-interpretable features that are internal to the computational system of syntax proper and drive syntactic derivations are categorical in native grammars; are acquired successfully by adult L2 learners; and are retained in the initial stages of individual attrition.
- Interpretable features that ‘exploit’ syntactic options and belong to the interface between syntax and other domains, such as the lexicon, discourse, or pragmatics, may exhibit gradedness in native grammars; may present residual optionality in near-native grammars, due to the influence of the native language even at the most advanced competence stage; and are vulnerable to change in individual attrition.

This is perhaps the clearest statement of the main tenets of an interface approach to optionality in L2A, and it is at the heart of much contemporary research. It is, however, not completely unproblematic (see below). In addition, research has begun to look more at the role of processing (Hopp 2007; Wilson et al 2008) in interface optionality rather than concentrating solely on the representation of grammatical knowledge, which this definition suggests seems to be at the heart of the problem.

3.2.1 The Role of Transfer in an Interface Approach

A strong view of L1 transfer at the interfaces is illustrated by the definition given above from Sorace (2006a: 111-112). Recall that central to that definition of residual optionality was the occurrence of “unsystematic L1 effects” in the L2. It will be argued in what follows that this notion is too strong and that there are conceptual difficulties with an undifferentiated notion of L1 transfer at the interfaces given the range of empirical evidence on different interface properties. This calls for a more fine-grained modular view of transfer, which may ultimately depend on the grammatical properties of the L1-L2 pairings in question and is perhaps not readily generalisable to a great extent.

Sorace herself indicates that L1 transfer need not necessarily be invoked to explain difficulties in mastering the interfaces in L2A. She observes that the differences between the two languages in L2A or bilingual L1A is not necessarily the locus of apparent interface difficulties, but rather that because the interfaces are *inherently* more complex than narrow syntax, these may be more difficult to acquire in a second language even where L1 transfer cannot apply (Sorace 2004: 144). So even where positive evidence would appear to facilitate acquisition of interface properties in the L2, it is possible that difficulties will persist. Note also that the logic of the definition of the difference between narrow and interface syntax (3.3) above, needs no recourse to the influence of the L1. Rather, it is suggested that interpretable features at the interfaces are more prone to give rise to optionality per se and so L1 transfer is not afforded any specific role in this context.

Empirical evidence is also available which calls into question the role the L1 seemingly plays in affecting the acquisition of interfaces. A prime candidate to test any assumption that the L1 plays a significant role is a case of L2A where both the L1 and TL are the same in relevant respects regarding the interfaces. Margaza and Bel (2006) provide evidence from L1 Greek learners of L2 Spanish showing that learners at intermediate stages of acquisition overuse overt pronouns, even though Greek is, like Spanish, a null-subject language and so would seem to facilitate acquisition of pronominal subject distribution in the L2. They interpret this as showing that transfer is operative at the level of syntax but not in all pragmatic contexts (Margaza and Bel 2006: 96)¹⁶. So the syntax of the L1 transfers, thus facilitating acquisition of the syntax of null-pronouns, while it remains problematic to get the pragmatic distribution right. This may not be irreconcilable with the approach outlined in Sorace (2006a), where it is assumed that L1 English continues to exert an influence on L2 Italian pronoun distribution because it has a more economical system for pronoun realisation, i.e. pronouns are always overt so there is no connection to the syntax-discourse/pragmatic interface. On this story, it could be argued that overt realisation of pronouns is simply more economical and thus all speakers, regardless of their L1 may tend to fall back on this option in their L2. Thus

¹⁶ This is obviously based on the assumption that Spanish and Greek are identical in the relevant respects. This is standardly assumed in the literature for pro-drop languages such as Greek, Spanish and Italian. However, it is conceivable that a more refined comparative parametric analysis (a la Ayoun and Westergaard, see Ch. 4) of the languages in question such might reveal subtle differences in pronoun distribution, which could in turn show up in transfer in L2A.

general economy considerations could be at work and learners may be more likely to realise L2 pronouns overtly as this is more economical and facilitates communication. However, it is important that Margaza and Bel (2006: 96) also report that this need not be a permanent state of affairs. They show that the more advanced learners in their study seem not to overuse overt subjects and so have acquired a native-like mastery of both the narrow syntax and the interfaces which regulate subject pronoun distribution.

Rothman (2009) also provides evidence from L1 English learners of L2 Spanish that seems to indicate that transfer from English cannot be the sole source of the problem in acquiring the distribution of overt versus null pronominal subjects. Interestingly, he also notes that the syntax-pragmatics interface is not inherently prone to fossilization and that even L1 English speakers eventually seem to fully acquire the pragmatic constraints on the distribution of null and post-verbal subjects in Spanish. The results which are relevant to the present discussion of L1 transfer come from the intermediate learners in Rothman's study, who in addition to overusing overt pronouns, also show evidence of overusing null-subjects in pragmatically infelicitous contexts which cannot be the result of influence from English¹⁷ (contra Sorace's assertion that there is asymmetry, see above). These results are interpreted as showing that L1 English still exerts an influence on L2 Spanish, but that it is not the unidirectional influence posited by Sorace (2006a); rather pronoun use is simply more difficult to acquire in Spanish because it involves the integration of syntactic and interface knowledge. Integration here may refer to a problem with online processing (see below). Thus "subject pronoun use for these L2 learners is in a state of free variation; it is unconstrained by the information-structure/pragmatics interface whereas, conversely, it is decidedly constrained by discourse context for native speakers of Spanish." (Rothman 2009: 967).

While Rothman still admits a role for L1 transfer, taken in tandem with the results from Margaza and Bel, it would seem that one could plausibly argue that the L1 in fact plays a much more restricted role in the acquisition of the interfaces, at least as far as null-pronouns can be taken as representative of interfaces more generally. Rather, it seems that the distribution of null subject pronouns is simply difficult to acquire in an L2 as it involves coordination of syntactic knowledge with discourse-pragmatics and thus could

¹⁷ Although as an instance of hypercorrection, it could be viewed as the indirect influence of English.

be the result of online processing difficulties for second language learners regardless of the representation available in the L1.

As mentioned, Margaza and Bel (2006: 96) interpret their results in the light of a modular approach, where transfer plays a role in syntax but not in pragmatic contexts. So the transfer of syntax might aid in the acquisition of a null-subject grammar, but the pragmatic distribution of null subjects in the L2 will not be aided by positive transfer from the discourse-pragmatics module. However, there is evidence that pragmatics or information structural preferences also transfer along with syntax in L2A. Bohnacker (2006, 2007) finds that L1 Swedish learners of German seem to have an underlying V2 grammar for German from the earliest stages of acquisition, whereas this is not the case where non-V2 L1 speakers target a V2 second language. Thus it would seem that the L1 grammar has transferred in its entirety as V2 implicates the highest functional projections in the clause. Interestingly, however, it is found that, in addition to syntax, information structural patterns also seem to transfer from Swedish (Rosén 2006; Bohnacker and Rosén 2007 a & b). Even though both Swedish and German are syntactically similar with respect to V2, it is shown on the basis of corpus evidence that each language has distinct preferences for what sorts of elements may occur in clause-initial position (Bohnacker and Rosén 2007a: 31-33). Specifically, Swedish seems to prefer thematic subjects, expletives and other informationally light elements in prefield position. While German also allows such elements to occur in the prefield, the tendency is not so obvious and there is a stronger preference than in Swedish for rhematic subjects and morphophonologically complex arguments and adjuncts in the prefield. Based on production evidence, it is shown that L1 Swedish learners of German seem to transfer their L1 preferences into their L2 German, resulting in the overuse of subject-initial and expletive-initial clauses. Thus it would seem based on these results that not only syntax but also information structure transfers from the L1. The tendency of course still favours an interface explanation as syntax is acquired before information structure, which shows evidence of transfer.

What can we make of these seemingly conflicting findings from Germanic and Romance? Firstly, in some respects they are perhaps not entirely incompatible as they both support the most fundamental tenet of the Interface Hypothesis that the interfaces

are more difficult to acquire than narrow syntax. Whether it is V2 or null-subjects, it seems that the narrow syntax connected to these phenomena is acquired more successfully in comparison to associated information structural properties. What these findings indicate in terms of L1 transfer is, however, more difficult to reconcile. Bohnacker and Rosén's results seem to show that the whole L1 system transfers, i.e. the narrow syntax of V2 as well as word order choices related to pragmatics. Margaza and Bel on the other hand seem to claim that while null-subject syntax transfers from the L1, the pragmatics governing distribution does not.

It is possible that these differences and the difficulties they raise for a theory of transfer at the interfaces are the result of the different grammatical phenomena studied. The nature of pronominals in any L2A context might give rise to overuse of overt pronouns as a default regardless of L1. Assuming that L2 speakers, especially at the intermediate stages as in Rothman's and Margaza and Bel's studies, might not have the full repertoire of linguistic means to track reference to entities online in L2 discourse, it is plausible that they may make more explicit use of pronominals in general so giving rise to more overt subjects. In sum, however, it seems that the role of transfer for the interface hypothesis is far from clear-cut. Based on the growing amount of supporting empirical evidence, the null hypothesis must be that the interfaces are inherently more difficult to acquire and so those areas of a language where there is interface-constrained variation will prove more problematic for L2 learners than narrow syntactic constraints. Where transfer seems to be in evidence, future research must tease apart whether this is due to general reasons of economy; whether there are distinctions in which modules of grammar may transfer (see Montrul 2000); and even whether some specific grammatical phenomena in different L1-L2 pairings may be more prone to transfer while others are not.

3.2.2 The Role of the Input

An area which is not covered to any great extent in the literature on interfaces in SLA is the aetiology of how exactly an interlanguage grammar is restructured during the course of development to arrive at an endstate where only the interfaces remain as the locus for residual optionality. This is important as the learners in the present study are all

instructed learners of English, as is usually the case in L2A research. As such, it would be erroneous to take monolingual native English as the model of the input to which they are exposed. Rather, they will tend to have learned from teachers who are themselves L2 speakers of English, and have significant non-target aural input from fellow students in classroom contexts. It is then likely that such input will give rise to divergences in the learners' grammars.

It is also not unexpected given a modular organisation of the grammar that specific modules might be more likely to transfer or more resistant to restructuring than others (Montrul 2000: 233). The challenge remains to account for why it seems that certain interface modules are more resistant than others. On the basis of her study of transitive alternations in L2 English, Spanish and Turkish by L1 speakers of the same languages, Montrul claims that the most satisfactory explanation of the problems with certain transitive alternations is that the L1 constitutes the initial state in all domains but that different modules reconfigure at different times. Lexico-syntax is thus restructured more quickly than morphology. However, the question of what might trigger restructuring of different modules at different times remains open (Montrul 2000: 267).

A possible answer is suggested in Sorace's definition of narrow versus interface syntax in (3.3) above. Recall that the definition states that in addition to presenting residual difficulties in SLA, interface syntax is also likely to be the locus of gradedness in native grammars. Taken in conjunction with any reasonable approach to restructuring based on input such as Full Transfer/Full Access, this then raises the possibility that it is at the interfaces that residual optionality is found because it is in these areas that the input is not completely determinate but rather subject to gradedness and therefore not robust enough to definitively restructure those modules of the interlanguage grammar.

The connection between interface syntax and the nature of the input has also received empirical backing. Chu and Schwartz (2005) studied adverb placement in L2 English by learners with L1 French and Chinese. They conclude that the input plays an important role in their subjects' acceptance of SVAO word order in English. Specifically, as verb movement is not an option in Chinese, it cannot be claimed that this is the root of the Chinese subjects' problems with adverb placement when they accept or produce orders

where the verb appears to have ‘moved’ over adverbs. Chu and Schwartz (2005: 82) claim that this is due to perceived irregularity in the English input. As adverb placement in English is variable and adverbs’ scope interpretation is non-linear, adverb placement could be misleading for learners of English. This provides an explanation for Yuan’s (2001) findings that French L1 learners seem not to have problems abandoning verb raising over adverbs in L2 Chinese while apparent verb movement is a persistent problem for L1 French learners of English. Chinese adverbs do not display the same variability in placement as their English counterparts and therefore provide more robust evidence.

There is an obvious connection to Sorace’s concept of gradedness here. The felicitous placement and interpretation of adverbs in English is crucially regulated by the interfaces. So, the surface syntax of adverbs depends on discourse factors and semantic properties such as scope relations, see Ex. (3.4).

(3.4) (Probably/*Completely) I (probably/*completely) will (probably/completely) lose my mind (probably/completely) before I finish writing (probably/*completely).

Adverbs of different kinds may in principle be realised in all of the positions marked here. However, the interpretation will be different for different positions, and some adverbs are felicitous only in a subset of these positions as they may be incompatible with the scope reading assigned to them in a certain linear order. In the light of this, and Chu and Schwartz’s (2005) results, two possible interpretations are possible. The first would deny any major role to transfer and claim simply that the apparent transfer of verb movement from French L1 into English could be reinterpreted as an interface problem in getting adverb placement right. The second interpretation would say that L1 French learners optionally raise lexical verbs because the English input does not provide robust enough evidence that verbs do not in raise over adverbs. Any English surface string where a lexical verb occurs before an adverb could be parsed by a French verb movement grammar and thus might persist as the L2 representation. This would explain the long observed pattern of non-movement of verbs over negation or in questions (White 1992). English questions and negation with *do*-support provide unambiguous evidence that the lexical verb cannot move in these contexts. In effect, this would

involve the claim that learners have a different grammar for verb movement with adverbs as opposed to verb movement with negation (or a different mutually inclusive parametric setting, cf. Ayoun 2003).

Rothman (2009: 967) also alludes to the possible role of input when acquiring the interface conditions on pronominal subject distribution; he likewise observes that learners must be exposed to unambiguous evidence from discourse patterns in order to acquire pragmatic features successfully. He mentions this as a possible confound in data as learners are usually exposed to other non-native input, which might also include non-native optional forms, and therefore it cannot be taken for granted that the input they receive is unambiguous with regard to discourse patterns. One might then claim that learners settle on the “best possible” grammar which makes the most of the available input and works best for their communicative purposes. Sorace (2005: 73-74) also points to the fact that qualitative differences in the sort of input received by bilingual speakers under attrition or L2 learners may diverge from that in a monolingual environment and thus foster the sort of optionality typical in these bilingual populations. She further points out that the extent of exposure to the relevant input is different so that bilingual speakers living in an environment where their L1 is spoken as an L2 or vice versa tend to receive input which is both qualitatively and quantitatively different from a monolingual context. She notes that “sustained exposure may be necessary both for *acquiring and maintaining* an efficient syntactic system” (Sorace 2005: 74, emphasis in original). As has already been mentioned, it is also possible that there are certain areas, e.g. adverb placement in English, where even naturalistic monolingual native input may not be completely unambiguous for L2 learners, therefore complicating their task in acquiring the L2, even in an ideal environment with monolingual native input.

So under the assumption that the L1 transfers in its entirety at the initial state in L2A and is subsequently restructured on the basis of L2 input, it is unsurprising that interface areas in particular remain problematic. The proposal to account for the seemingly more difficult nature of the interfaces then is to assume that different modules of the grammar may restructure at different rates. The reason that interpretative elements of the grammar are problematic is that they are inherently more complex, and it is these areas

where the input may itself be subject to gradience and optionality and therefore fail to provide determinate evidence to definitively abandon an L1 option in all contexts.

3.2.3 Processing and Representation.

The preceding discussion implicitly assumed an exclusively representational account of variability or instability at the interfaces. We have looked at evidence that structures which require the felicitous use of interpretable features such as [+Focus] and [+Topic-shift] at the discourse-pragmatics interface tend to be subject to residual optionality even in near-native L2 speakers. This should be reminiscent of the parameter resetting hypotheses which posit an impairment to specific areas, such as particular features (Hawkins & Chan's (1997) Failed Functional Features Hypothesis; Tsimpli & Dimitrakopoulou's (2007) Interpretability Hypothesis) or the strength of functional features (Beck's (1998) Local Impairment Hypothesis). A representational approach to the interface hypothesis is similar in that it claims that narrow syntactic i.e. uninterpretable, features are acquired relatively straightforwardly while interpretable features relevant to the discourse-pragmatics interface, are problematic in acquisition.

By referring to the nature of the input as well as to notions of economy and transfer, the interface account can provide a sound motivation for why these particular interface-related features remain variable in L2A. As has been discussed, there seems to be evidence of gradedness and optionality at the interfaces in native monolingual speakers (see Sorace & Keller 2005). Therefore the nature of the input received by L2 learners is less robust in the area of interface syntax, thereby perhaps giving rise to representations of features relevant to specific interfaces which diverge from the native norm. When this is coupled with the fact that economy might play a role in the acquisition of interfaces, this provides a principled account of why interfaces display variability. So where a specific area of a language is regulated by the interfaces, a more economical form from the L1 might be preferred. While it provides a conceptual framework in which to situate the notion of a representational deficit at the interfaces; economy could, however, just as well be viewed from a processing perspective, whereby online processing which requires knowledge both from syntax and from pragmatics and other areas is more complex and so a default option is preferred.

Research in the processing tradition has examined the interface between syntax and morphology and proposed the Missing Surface Inflection Hypothesis (MSIH) (Prévost and White 2000a & b) to account for variability in this interface. Various scholars working in this area have endorsed the view that the problem is one of mapping in production between syntax and morphophonology. So even though the syntax is intact and the morphological forms, once acquired, are available in the lexicon, the problem lies in accessing these forms and integrating the two areas online. Evidence comes from the fact that even though it is possible that a learner of English seems to have an intact syntactic representation in that they ‘know’ that lexical verbs do not raise, i.e. they have acquired the appropriate representation of features which prevent movement to functional Tense or Agreement nodes, they may have consistent problems supplying the inflectional morphology for tense and case, which are also reflexes of this morphosyntactic representation (see Lardiere 1998 a & b; 2000 for more detail). As the variability seems to be purely at the level of the presence versus absence of inflectional morphology rather than the use of incorrect forms, it seems that the representation is sound and the sole problem is access to the morphology. The problem is therefore one of online coordination of the syntax with its morphophonological reflexes.

Sorace (2006a & b) proposes that a representational deficit approach can and should be reconciled with a processing account. She draws on work by Jakubowicz (2000) (published as Jakubowicz & Nash 2001) to provide a plausible way of thinking about the issue of complexity from a psycholinguistic point of view. Jakubowicz and Nash (2001) propose that syntactic structures may be thought of as complex or non-complex and a Computational Complexity Hypothesis is put forward to account for differences in the acquisition of complex as opposed to non-complex structures by children with specific language impairment.

The technical definition of complexity in this case is to be understood as “the syntactic computation in a given language is LESS COMPLEX when a merged functional category must be present in EVERY sentence... The syntactic computation is MORE COMPLEX if a merged functional category is present in SOME sentences” (Jakubowicz and Nash 2001: 324). This definition is slightly problematic as it is

developed for the case of the acquisition of the present/past distinction by children acquiring French and rests on a specific structural analysis of the how the present/past distinction may be instantiated in French. It is nonetheless relatively straightforward to see the connection to the problem of acquiring interfaces in L2A. Those areas which are consistent and uniform as they belong to narrow syntax are less complex than areas where there is variability depending on context. While this would seem to provide support for the representational deficit view by giving a grounding for why complex interface properties might not be accurately represented, Sorace (2006a: 119) builds on this to propose the generalisation based on processing given in (3.5).

(3.5) Processing Complexity.

- Structures requiring the integration or syntactic knowledge and knowledge from other domains are more complex than structures requiring syntactic knowledge only.
- Complex structures may present gradedness and variation in native grammars; may pose emerging difficulties to L1 speakers experiencing attrition from a second language because of increasingly frequent failure to coordinate/integrate different types of knowledge.

She complements this with evidence from psycholinguistic studies of online processing (see e.g. Clahsen and Felser 2006 and commentary in Sorace 2006b). The relevant findings are that L2 speakers may not be able to carry out the same sort of grammatical parsing of the L2 online as would be the case in L1 parsing, rather they compute only ‘shallow parses’ without accessing the full structure. This then has ramifications for the Noticing Hypothesis and the failure-driven mechanism proposed by FT/FA. If a learner cannot fully parse and understand an utterance, she will not notice and acquire the relevant grammatical aspects. If learning is driven by the failure to assign a representation, not computing full parses will inhibit the acquisition of target representations.

If this sort of study of online comprehension can be extended to the case of online production, Sorace (2006a: 120-121) argues that the fact that the L2 speaker does not possess optimal online processing resources in the L2 means that they may in some

cases rely on an L1-based strategy. It is precisely at the interfaces where syntactic knowledge must be coordinated with other modules that processing demands are greatest and therefore an L2 speaker, who presumably lacks optimal processing resources to coordinate syntax and interfaces for the L2, may fall back on the L1 option in these instances. Felser & Clahsen (2009) provide further evidence that adult L2 learners do in fact differ in their processing of an L2 and rely more on semantic and lexical information rather than grammatical parsing routines.

This would provide an account for some of the troublesome empirical data we encountered earlier where the L1 and TL are similar in relevant respects. Under a processing view, it is unsurprising that L1 Greek learners of L2 Spanish will overproduce overt pronominal subjects if this is the result of an online processing problem, as such issues will be common to all learners. Similarly, for L1 Swedish learners of L2 German, the successful acquisition of verb movement is unsurprising as it belongs to narrow syntax, but the continued problems with clause-initial position are to be expected as the choice of what occurs in this position involves the higher processing cost of coordinating the narrow syntax with information structure.

We will conclude this general discussion interfaces with Sorace's (2006a: 123) suggestion that it is plausible that a processing and a representational model need not exclude each other and sometimes seem to work together to give rise to optionality effects at the interfaces in SLA. It will take further research to work out the details of how exactly processing and representation complement each other. In the context of the present study, processing cannot be directly tested but the aim is to assess the role of the input and the L1 thereby clarifying some of the issues which are thought to be pivotal to the (non)-acquisition of interface phenomena.

3.3 Summary

Even though areas of difficulty still remain to be worked out, for example in terms of the extent and importance of transfer at the interfaces and whether or not transfer might be modular, the wealth of evidence from different developmental areas indicates that the interfaces are intrinsically more unstable, or from an acquisition point of view, more

difficult to acquire than narrow syntax. Whether prolonged optionality with interface properties is due to representational deficits in the L2 or to more general principles of processing an L2 is an important question which is beginning to be addressed more in current research. It is, however, not of central importance for the present study as the test instruments do not permit an evaluation of the competing hypotheses.

Nevertheless, the basic observation that interface properties often pose more problems to L2ers (and in other bilingual contexts) seems reasonably robust. In addition to being empirically grounded, this idea is also intuitively appealing. It would seem natural for the rules of grammar to be simpler for L2 learners to get to grips with than discourse and pragmatics (understood as the conventionalised linguistic pragmatics of a particular language), where there is often evidence of gradience and variability even in monolingual native populations. Given that the felicity of the V2 properties of English is often connected to interface properties, the Interface Hypothesis predicts that this will add to the difficulty of acquiring these structures giving rise to continued transfer in contexts where XPs are fronted for discourse-pragmatic reasons.

On a final point, it should be made clear what is *not* being claimed for the learners in this study. Sorace's hypothesis of residual optionality at the interfaces was originally put forward to account for optionality in near-native L2 speakers at the end-state of L2A. The interface hypothesis does not necessarily predict that *all* learners will show optionality or variability *only* at the interfaces, but applies exclusively to near-native speakers. I make no claim that the learners in the current study are at the end-state of L2A, nor that they could be considered to be near-native speakers. They are, however, undoubtedly relatively advanced L2 learners and the Interface Hypothesis implicitly makes predictions about developmental sequences in the acquisition process. In particular, it predicts that narrow syntactic constraints will be more easily acquired. In concrete terms for L2 English, this means that the lack of verb movement will be acquired more quickly than inversion.

4 Mixed Languages, Microparameters and Competing Grammars

As outlined in Chapter 1, it is not simply the case that learners of English must acquire a V3 grammar. Rather, they must put in place a variety of V2 requirements for English. The fact that many of these V2 properties are optional and connected to the interfaces might mean that this will prove difficult for all learners regardless of L1. It might also be hypothesised that these areas will show evidence of transfer from the L1. It is therefore necessary to investigate how variable parametric options may be conceptualised for languages, and acquired in an L2. The approaches we outline in the current chapter assume that parameter resetting is at work in both first and second language acquisition, but they posit a fundamentally different view of the parametric architecture. They thus aim to account for the sort of optionality and variability pervasive in acquisition data.

We begin with a consideration of the nature of diachronic change and how the nature of optionality in the course of change has been applied to L2A. From this analogy, we move on to outline three specific proposals which invoke either grammar competition or a more refined analysis of parameters to account for the occurrence and acquisition of the V2 properties of English. Of these, the most plausible would appear to be mutually inclusive parameters and micro-parameters, which do not need to propose the existence of multiple distinct grammars.

4.1 Competition, Optionality and Diachronic Change

Theories of diachronic change must necessarily also be theories of first language acquisition (or possibly second language acquisition in conditions where an external language community becomes more dominant in a specific time and place). A wealth of scholarship has looked at diachronic syntactic changes from the point of view of a competing grammars model. A great deal of this scholarship has concentrated on verb movement and the V2 constraint in the history of English and its gradual erosion (Kroch and Taylor 1997; Kroch, Taylor and Ringe 2000; Pintzuk 1999, *inter alia*). It would not

be possible to give here an accurate picture of the complexities of V2 word order and the details of the processes of change in Old and Middle English and readers are referred to work by the scholars cited above for more detailed historical data and analysis. Basically, it is proposed that there were two distinct grammars; a consistent V2 dialect in the north of England while in the south V2 was optional. Further to this competition at the population level, it has also been assumed that children acquiring a language may develop distinct underlying grammars where they are exposed to distinct grammatical options in the input and thus develop “internalized diglossia” Lightfoot (1999: 94).

V2 has eroded only gradually in the history of English leaving various residual V2 constraints or options still available in modern English (see Warner 2007 for development of inversion and verb movement showing that changes begun in the Old English period were only complete in the eighteenth century). The analogy to the course of optionality in the loss of V2 in L2A, i.e. the task facing an L1 German learner of English should be clear.

4.1.1 Diachronic Competition and Language Acquisition

This sort of analogy for periods of diachronic change led Zobl and Liceras (2005) to compare the historical evidence with L2A data from studies of the resetting of the V2 parameter (Hulk 1991; Robertson and Sorace 1999, see also Chapter 5). Montrul (1997) similarly draws explicit comparisons between historical and L2 data in terms of the development of dative case, but we shall concentrate in what follows on V2 data. The Hulk data is taken by Zobl and Liceras (2005: 287) to indicate that the developmental sequence of ‘losing’ V2 in the acquisition of an L2 mirrors the loss of V2 in the history of English. Thus in both scenarios, the headedness of VP and IP are reset initially. However, the V2 constraint continues to be an option for longer, i.e. right up to the most advanced level tested in L2A, and, in the case of historical change, modern English still retains V2 properties centuries after the process of change commenced. The analysis suggests that the similar developmental paths indicate that the L2 learners have adopted an IP-V2 grammar on the way to losing V2 and that this competes with other grammars, i.e. CP-V2 and V3, in the same way as has been suggested to account for patterns in the

historical data. Thus, the changes in underlying syntactic representations of individual L2 learners are more or less the same as those which occur at the population level during historical periods of parametric change.

Zobl and Liceras's (2005: 288) reconsideration of Robertson and Sorace's (1999) data is similarly taken to be analysable in terms of a quickly adopted head-initial IP-V2 grammar and that this "coexists in recessive fashion" with a target-like non-V2 English grammar. This thus gives rise to continued optional production and acceptance of inversion conforming to V2 while the other L1 parametric options have been successfully reset to the target English values.

It would seem then that there is some similarity in the trajectory of historical changes and the pattern of changes in L2A related to losing V2. However, the historical analogy must be treated with some caution as it is just that: an analogy. Production or acceptance of optional forms by second language learners could be taken in itself as evidence of competing grammatical representations. It is not clear why the finding that there seems to be parallels with diachronic change should be taken as stronger evidence in favour of competing grammars for L2A. It might indicate that an IP-V2 grammar is in general developmentally more vulnerable than a CP-V2 grammar. But it is not obvious, apart from by analogy to the analysis of the historical data, why V2-L1 learners should adopt an IP-V2 grammar at any stage in their development. Evidence in the English input which is consistent with V2, e.g. SVO sentences, could just as well reinforce an existing L1 CP-V2 grammar which could give rise to optional V2.

The observation at the heart of the connection between diachronic change and SLA is that the process of acquiring a second language is different from L1A in the crucial respect that L1A involves *setting* parametric values, while L2A involves *resetting* the L1 parametric values to the appropriate target language settings, in the same way that parametric options. It could be argued, therefore, that insights into the parameter resetting process in SLA are more likely to be drawn from a comparison with another phenomenon where parameters are in the process of being reset, i.e. diachronic change, rather than from the traditionally more dominant paradigm of comparing development in second language acquisition to the process of children acquiring their native language

(Zobl and Liceras 2005: 284). In some ways, this metaphor does not extend as naturally as Zobl & Liceras suggest. Resetting in the course of historical change involves the loss of a parameter setting, which is gradually replaced at the population level by the new form. In L2A, of course, the challenge is to add a new parameter setting for the L2 to the existing L1 parametric options rather than ‘losing’ the L1 parameters.

Yang (2000, 2002, 2004) outlines a variational theory of language acquisition and change, which also assumes grammar competition. He introduces a mathematical model of learning based on competing grammars and uses this to account for the loss of V2 in Old English and Old French (Yang 2000).¹⁸ Thus any historical stage of a language and any point in the linguistic development of individuals can be modelled as a population of grammars which compete to establish a particular equilibrium which underlies optional surface forms.

Yang (2002: 15-17) characterises this notion as a departure from two fundamental assumptions within the P&P approach to first language acquisition: transformational learning and triggering. We have already encountered this sort of assumption for L2A in the Full Transfer model of parameter resetting. Again briefly, it is assumed that the failure of a learner’s current grammar to parse a particular string in the input will result in the grammar being restructured and possibly a new parametric option being adopted to accommodate the input. For example, *do*-support in English could be a trigger to set a non-verb-movement parameter. Related to this sort of model is transformational learning, which sees a learner’s single grammar as undergoing direct changes based on evidence from the input and thus moving from a certain ‘stage’ of acquisition to another as the hypothesis of grammar changes from one state to another. As will be obvious from the previous chapters, transformational thinking pervades P&P approaches to SLA, as is implicit in discussions of learners being at a particular ‘stage’ of acquisition and moving between discrete stages during the course of learning the second language (see however also Vainikka and Young-Scholten’s (1996a: 13) description of stages in their model as competition between grammatical representations).

¹⁸ Refer to Yang (2002: 26-30) for a detailed exposition of the learning algorithm and supporting evidence from mathematical psychology. See also Mitchener (2006) for a mathematical model of the loss of V2 in the history of English.

It is not immediately clear if these formal problems Yang identifies for L1A could be applied so straightforwardly to L2A as second language acquisition has several complicating factors. The learners already have a full L1 grammar, which they may use in constructing the L2 grammar, L2 learners often receive explicit negative input in the form of formal teaching, and second language learners may consciously reflect on the process of learning the second language and employ explicit learning strategies.

In sum, it would seem that while the impetus for the competing grammars model comes from studies of historical change, it is only of limited use to make explicit comparisons between historical and L2 data. Nevertheless, the competing grammars hypothesis might still be relevant for L2A, and for language acquisition more generally. This would be the case if we remove the explicit link between analyses of historical data and L2 data. While there may be commonalities which might be informative about the course of language development more generally, it is not clear why the same analyses must therefore necessarily apply to both scenarios. These shortcomings are not so serious if one accepts the sort of model Yang proposes whereby surface features of language are always the result of competition between a population of different grammars and not just during periods of language change. Next, we explore the logical entailment of such an approach as applied to V2 in English.

4.2 Universal Bilingualism and Lexically Restricted V2

If any synchronic language stage is in fact made up of a number of distinct competing grammars, this has important repercussions for the concept of parameter resetting in L2A as it implies that the process of acquiring a second language does not necessarily involve setting or resetting distinct parameters to acquire a new grammar but rather to acquire a collection of the distinct grammars and the interactions between these which give rise to felicitous surface optionality in the L2. Roeper (1999) outlines an account of how this sort of multiple-grammars mechanism might work for the occurrence of English V2 in register variation and L1A. From this, it is possible to derive hypotheses for L2A. Roeper (1999) provides only a programmatic sketch of Universal Bilingualism (UB), also referred to as Theoretical Bilingualism (TB). This has not been developed in

significant detail elsewhere by Roeper himself and as such, the proposed analysis suffers some conceptual and technical difficulties (for discussion see peer commentaries, in particular Haider (1999), Hawkins (1999), O'Neill (1999)). Nevertheless, the theoretical proposal and the empirical data are pertinent for our consideration of the nature of the acquisition of V2 in English.

Universal Bilingualism assumes that “a narrow kind of bilingualism exists within every language. It is present whenever two properties exist in a language that are not stateable within a single grammar” (Roeper 1999: 169). The aim of this sort of reasoning is to do away with the learnability problem posed by optionality. A single grammar does not tolerate contradictory rules and therefore one must postulate more than one grammar, even where the difference is confined to a single rule (Roeper 1999: 170). The problem of triggering no longer applies as evidence in the input does not need to trigger categorical parametric options within a single grammar, but rather can be accommodated by different grammars.

An example of distinct underlying grammars according to Roeper would be pro-drop in English, which is obviously not a pro-drop language like Spanish or Italian. However, in certain contexts, it is still acceptable to omit the subject, as in “seems like a good idea”/“looks good to me”, which Roeper (1999: 173) observes is typical of a certain informal speech register (see also Haegeman & Ihsane 2002 on “Diary Drop” i.e. pro-drop in diary-writing registers). It would therefore seem that the choice of a specific grammar, which allows null subjects and depends on inference from the context, can be linked to social register. Thus to the extent that different social registers instantiate distinct grammatical patterns, one can say that native speaker competence encompasses distinct grammars. How exactly social factors and context impinge on the more abstract linguistic capacity remains somewhat vague, but it has been argued elsewhere that such notions are important. Avrutin (2006) sees the language of aphasics as reflecting a greater reliance on the context of utterance as the result of impairment to the computational machinery of the narrow syntax. Interestingly, he points out that certain similar features can be found in special registers in unimpaired language, for example, tenseless clauses may be acceptable in certain contexts where they would be ungrammatical otherwise, e.g. “John dance?! Never!!!” (Avrutin 2006: 51).

This, of course, does not confirm Roeper's (1999: 172) argument that "[theoretical] bilingualism [...] can allow one to evade those features of one grammar immune to contextual information by choosing another grammar where context is utilised. The effect is to shift speech register, since heavy reliance on context conveys informality." It would take a great deal more research on the formal grammatical correlates of variation and speech registers to get closer to a cogent account of whether such a connection really exists and how it works. More interesting is the suggestion that in addition to speech register, grammars may be localised according to lexical classes. This is the explanation Roeper proposes for V2 in English, and it is perhaps in general a more tractable issue as it does not depend on ill-defined links between linguistic phenomena and extra-linguistic context.

The historical connection is obvious in the observation that there is a family of quasi-idiomatic expressions in Modern English which continues to make use of a verb-final/V2 grammar reminiscent of Old English Ex. (4.1) (Roeper 1999: 173-174).

- (4.1) a. A single salad does not a dinner make.
b. Say you so?
c. It matters not what you do.

What these have in common is that the expressions are only acceptable with these particular verbs, compare "*A tiny orange does not someone peel"¹⁹. It would seem then that V2 is related to a certain set of verbs in modern English, in Roeper's (1999: 175-176) words, "English evolved from a V2 language and retains a subvocabulary which continues to adhere to that grammar." This is particularly the case with *be* and *have* as main verbs, both of which produce V2 patterns as in Ex. (4.2)

¹⁹ For this example, there is a question mark about whether it is in fact an analogous structure to 4.1a. One might propose that 4.1a is a relatively frozen idiomatic expression which is not extendible in any way to other forms. A recurrent theme with competing grammars/mini-parameters approaches is the extent to which one may view the apparent mini-grammars/parameters as confined to specific constructions, thus negating the need to propose parametric options or productive grammars to account for the occurrence of peripheral constructions.

- (4.2) a. Are you happy?
b. Have you an excuse for this?

A child acquiring English is in fact exposed to two grammars: a V2 grammar with *be* and *have*, and a non-V2 grammar with most other thematic verbs. When used in quotation, all verbs of speaking and reporting also allow V2. Given that children are exposed to both [+V2] and [-V2] input, how do they avoid setting the parameter definitively one way or the other, i.e. a non-target generalised V2 constraint or an inappropriately uniform V3 grammar which does not permit any V2 at all? Based on developmental data, the answer seems to be that rather than paying attention to raw frequency, the child is sensitive to differences in lexical classes. Thus they apply different grammatical representation to the input, and the optionality in the course of development is in effect the overt expression of underlying “bilingualism” or multiple distinct grammars in the same way as underlying bilingualism gives rise to distinct parametric options in social registers. Children acquiring English must be sensitive to the different syntactic behaviour of different classes of verbs rather than just overall frequency if they are to avoid postulating a generalised V2 constraint on the basis of the frequent occurrence of V2 patterns in the input in general, especially the frequent occurrence of V2 patterns with *be*. In fact there appears to be evidence that children acquiring English seem to overgeneralise only *within* lexical classes. Roeper (1999: 175) notes that by producing utterances such as “do it be colored” and “did there be some”, children show evidence of attempting to treat *be* like any other lexical verb, which does not undergo V2. Similarly, he presents personal diary evidence that a child for a short period of about a week produced utterances of the form in Ex. (4.3).

- (4.3) a. What means that?
b. What calls that?

This would seem to show that the child in question had generalised within the semantic class to which *be* belongs and so allowed V2 with various verbs which can be said to be ‘equative’ (such as *be*, *equal*, *constitute*, etc.), but he had not extended V2 to other types of verbs. This is important as, if it can be applied to L2A, it would suggest that V2

might be acquired in a lexically restrictive fashion. As we have already reviewed, Herschensohn (1998: 327) indeed suggests an analysis of resetting the verb movement parameter in L2A “whereby intermediate L2ers rely on acquisition of constructions relating to specific lexical items to gain what appears to be partial control of a new parametric value”. Roeper offers this as support that L2A proceeds in a lexically restricted way and so it might be expected that similar processes could be in evidence in L2A as he identifies for L1A.

Given that *be* is the most frequently occurring verb in English and that it behaves in a V2 fashion, it is perhaps unsurprising that learners might assume that English has a more general V2 constraint than it actually does. What is important is that Roeper’s idea would suggest that not only V2-L1 learners would have problems acquiring the English V2 system, but that learners with non-V2 L1s would also perhaps overgeneralise from the English input and produce non-target V2 forms which reflect overgeneralisation *within* certain classes of verb. Thus a prediction is that ungrammatical V2 would only involve certain specific classes of verbs in the L2 data, which is tested in the grammaticality judgement studies presented in Chapters 8 and 10.

However, a caveat is in order here. Roeper does not really do justice to the full range of V2 structures in English. He draws a distinction between V2 in Modern English and residual V2, where interrogative and negative inversion are examples of residual V2 while full verb inversion structures are examples of lexically-linked V2 (Roeper 1999: 181). While he mentions stylistic inversion as belonging within the V2 inventory (Roeper 2007: 33), he does not expand on how exactly it should be viewed in the UB approach, nor how it might be acquired. It is indeed linked to certain classes of verb but this alone would be insufficient as the type of verb is just one of a roster of factors which regulates the felicity of SI in context. Indeed he mentions that a child must pay attention to “the emphatic nature of stylistic inversion” (Roper 2007: 34), but in a system which conceives of V2 as linked only to classes of verbs, it is not clear how this fits in.

In addition to providing an interesting account of the distribution of V2 in English, the UB proposal provides an opportunity to look at a variety of issues in linguistics, such as

register variation, L1A/L2A, bilingualism, etc., in a different, and maybe productive, way. However, this is at the expense of the loss of theoretical elegance and simplicity. In particular, the model assumes a complex cognitive-linguistic architecture with any number of possible grammars linked to different semantic classes, syntactic structures, and possibly individual words. In many ways, therefore, it reduces in effect to saying that there are specific, individual constructions for different lexical items. It is, of course, a priori necessary that the human language faculty must be able to cope with distinct grammars, otherwise bilingualism would not be possible. However, it is not clear why the added complexity in terms of the number of grammars is justified when it is possible to account for variability and optionality without recourse to multiplying the grammars underlying an individual speaker's competence. One may assume the existence either of peripheral constructions which are semi-regular patterns or idiomatic expressions separate from the core generative system (see Section 4.3.3 below).

4.3 Parametric Optionality *within* Grammars

The same implicit assumption as underlies the UB model is very much in line with the usual assumptions of traditional binary parameters and parameter (re)setting theory that transformational learning occurs as a learner moves from one distinct stage to the next, (re)setting parameters. As has been established on the basis of abundant empirical evidence for L2A, it is usually not the case that parametric options cluster together in this way. For example, L1 French learners of English have few problems establishing that verbs do not move over negation in English but continue to produce verb movement over adverbs (cf. the studies by White 1990, 1992). This might be seen as evidence of a breakdown in the acquisition process in L2A, whereby parameter resetting is impossible. We have seen in Chapter 2 that this can be accounted for in a constructionist approach to SLA. However, perhaps it is the theoretical conceptualisation of binary parameter settings which is problematic. The models to be outlined in what follows recast cross-linguistic variation in a more refined parametric light and this obviously has repercussions for the sort of optional data familiar from L2 studies.

4.3.1 V2 Microparameters in a Split-Force System

The idea of V2 microparameters, proposed originally in Westergaard and Vangsnes (2005), accommodates optionality by proposing a more differentiated “micro-parametric” approach which breaks down the global V2 parameter into a number of individual micro-parameters which account for the range of cross-linguistic variation in V2 languages. Westergaard (2008: 1856) specifically sets this against a competition model of diachronic change and suggests that microparameters for V2 can explain the acquisition and historical development of the constraint without reference to competing grammars.

The observation which inspires the V2 microparameters approach is that certain types of clauses in Germanic languages and dialects seem to require V2 while it is optional or ungrammatical in other clause-types. For example, Yiddish and Icelandic are both ‘well behaved’ V2 languages which require V2 in all contexts, even in embedded clauses, (see Diesing 1990 for Yiddish; Rögnvaldsson & Thráinsson 1990 for Icelandic), German and Dutch have V2 in main clauses but not in embedded, and English has only residual V2 in a very restricted range of contexts. Westergaard and Vangsnes’s (2005) original proposal of a refinement of Rizzi’s (1997) Split-CP architecture to account for optional V2 in certain Norwegian dialects has been subsequently extended and revised by Westergaard (2005a, b, 2007a, b) to explain the various residual V2 phenomena in English. This can be illustrated by the distinction between main clause declaratives and interrogatives in English and German. Compare Exs (4.4) and (4.5). As discussed in Chapter 1, interrogatives in both languages share a V2 constraint, while this does not extend to most types of declarative in English, where there is no inversion after topicalisation (4.4c).

- (4.4) a. Who did you meet yesterday?
b. Did you see Babsi?
c. I saw Sally. Babsi I haven’t seen for ages.

- (4.5) a. Wen trafst du gestern?
 b. Hast du Babsi gesehen?
 c. Ich traf Sally. Babsi habe ich schon lang nicht mehr gesehen.

To capture such distinctions, the microparametric approach invokes a Split-Force model of the left-periphery. ForceP in Rizzi's (1997) Split-CP architecture is split further into a number of syntactic projections, and the illocutionary force of different types of clause is encoded by a range of functional heads.²⁰ The precise architecture of the left-periphery in this approach is somewhat fluid. The original formulation in Westergaard and Vangsnes (2005) has been refined and reformulated, invoking different constellations of functional projections. The following structure is taken from Westergaard (2006: 665)

- (4.6) $_{CP}$ [Int[°] Pol[°] Top[°]...] ... [(Wh[°]) Fin[°] IP [...]

Other possible heads proposed in the Split-Force model include Excl(amative)[°] and Foc[°]. The typology of the main clause depends on which of these heads is present, a *wh*-question is an Int(errogative)P, a direct question a Pol(arity)P, a declarative a TopP, etc. Embedded clauses are assumed to be WhPs or FinPs depending on whether they are embedded questions or declaratives.²¹

Following Vangsnes (1999), it is assumed that these empty functional heads must be licensed by being 'identified' by the presence of overt material either in their specifier or head position at some step in the derivation. Microparametric variation is then the result not of a binary parametric setting but rather a variety of V2 grammars are licensed, with the variation between languages or dialects confined to the presence or absence of an Extended Projection Principle (EPP) property on the different Force heads. So a [+EPP] X[°] will require movement to check the EPP feature. Assuming this sort of architecture, we can explain the comparative distinctions in (4.4) and (4.5)

²⁰ The idea that V2 is connected in some way to marking illocutionary force is not novel. See for example Brandner (2004) and references cited there.

²¹ In the discussion to follow I continue to refer to "C", "C heads", etc. This can be understood as a shorthand for the various projections which might be present in the Split-Force model.

above. TopP in the Split-Force system encodes declarative clauses and the subject moves to its specifier as a default when there are no constituents which are topicalised for information structural reasons. As (4.5) illustrates, the Top^o head in German is [+EPP] and requires movement, while English does not. So the Germanic languages differ in terms of which of the Force heads require lexicalisation. The heads which are lexicalised give rise to V2 in the clause-types they encode.

The approach as applied to English V2 is, however, not entirely without problems, especially as it relates to stylistic inversion as a possible V2 property. The original formulation of microparameters was used to explain the optionality of V2 in interrogatives in the Tromsø dialect of Norwegian (Westergaard & Vangsnes 2005). It was found that the optionality depended on the type and function of *wh*-element and on information structure, with V2 preferred where the subject is new, usually a full DP, and where the verb is semantically light, usually *be* (Westergaard and Vangsnes 2005: 125). The analogy to stylistic inversion in English should be clear, and this leads Westergaard (2007a) to extend the analysis to SI. The implementation of a V2 microparameter in English declaratives is necessarily somewhat more involved than the more straightforward account for the syntactic requirement in questions. The fundamentals remain however much the same. The idea is that another functional projection, LowTopP, is available lower in the structure than the force heads. LowTopP is sensitive to information structure as it only attracts elements which are informationally light. Thus in modern English declaratives, where the discourse configuration is appropriate, once a subject has moved out of VP to Spec-TP, a remnant VP, which is informationally lighter than the subject, may subsequently move to Spec-LowTopP. This analysis also then captures the fact that verbal clusters may also take part in SI rather than just the finite elements in periphrastic tenses (4.7).

(4.7) On the mat was sitting a fat cat.

The technicalities of this analysis are not necessarily completely satisfying. It is not clear what drives the remnant movement. Obviously pragmatic properties are at work given the optionality of the structure and the requirement that the remnant VP be informationally lighter than the subject, but how exactly these pragmatic properties are

represented in the syntax and give rise to syntactic movement is not made explicit. So it remains vague what one should understand by “sensitive to information structure.”

Thus, exceptions have to be proposed even within a microparametric approach. A relevant example is provided by Westergaard’s analysis of the optionality of V2 after *kanskje* (Norwegian *maybe*). She refers to this as “low level grammar competition, i.e. competition between word orders that does not seem to be dependent on linguistically relevant factors” (Westergaard 2008: 1859). She formulates this as a structural micro-cue as in (4.8).

(4.8) $\text{TopP}[\textit{kanskje} \text{SU} \dots \text{VP}[\text{V}]]$

It would seem then that this model can explain the cross-linguistic variation in the realisation of V2 and the variation within individual languages in terms of their V2 requirements. On this view, for example, the Germanic languages can be seen as at different points on a continuum between well-behaved V2 languages such as Icelandic and languages with only residual V2 properties such as English. However, when confronted with optionality *within* a single clause type, as with stylistic inversion in English declaratives, the explanation becomes slightly more problematic.

4.3.1.1 Acquiring Micro-Parameters

The acquisition of V2 under the microparametric approach invokes Lightfoot’s (1999) cue-based theory of acquisition and refines this to a theory of micro-cues (Westergaard 2009). Lightfoot’s cue based model assumes that children acquiring their L1 are sensitive to certain structural cues in the input, the presence of which serves to set a parameter to a certain value. For V2, it is proposed that the relevant cue is topicalisation as in (4.9) (Lightfoot 2006: 86).

(4.9) $\text{CP}[\text{XP}_C \text{V} \dots]$

It is assumed that when a phrasal category immediately precedes a finite verb in this sort of configuration, there is a UG requirement that the verb must be in C (Lightfoot

1999: 93). Given that SVO utterances are ambiguous with respect to V2, a child assuming that the verb was in C only as an optional variant would require negative evidence to set the target grammar. The sort of cue in (4.9) given by UG will therefore allow a child to establish that finite verbs occur invariably in C and so set a V2 grammar. The cue must, however, be expressed robustly if the child is to acquire a V2 grammar. It is assumed that when the rate of non-subject initial V2 clauses declined in the history of English, the cue no longer reached the necessary frequency threshold to set a V2 grammar and consequently children during the Middle English period acquired an XSVO grammar resulting in the loss of the V2 constraint from English (see Lightfoot 1999: 156-157).

In the Split-Force model, where each type of clause is headed by a different projection, each of these Force heads will naturally then require a separate cue to establish whether or not it has a V2 requirement (see Westergaard 2008: 1856). So for example, $_{\text{Top}^\circ}\text{XP}$ will be relevant for setting the V2 requirement in main declarative clauses, likewise $_{\text{IntP}}[\text{wh}_{\text{Int}^\circ}\text{V}]$ will be the piece of structure relevant to set V2 in main clause direct questions. As Westergaard (2008: 1857) explains:

“According to this model, there is no ‘global’ cue for V2 syntax, but separate so-called ‘micro-cues’ for each clause type. This means that when children scan the primary linguistic data for word order cues, this is a selective process where only a particular clause type is relevant. When searching the input for possible cues for verb movement to the Top° head, for example, children will only consider declaratives and ignore other clause types such as *wh*-questions or imperatives. That is, the word order of other clause types is in fact irrelevant and does not constitute counter evidence for the micro-cue expressed in declaratives.”

Westergaard (2008) has shown that the Tromsø dialect of Norwegian has optionality, where the choice between V2 and V3 in certain *wh*-contexts is dependent on information structure and type of *wh*-constituent. Furthermore, children acquiring this dialect acquire the nature of the optionality early and consistently. This can be accommodated by the micro-cues model, which allows children immediately to “zoom in on the syntactic distinctions that are relevant for the target grammar” (Westergaard 2009a: 206). There is no transfer between different clause-types. This allows a prediction for L2A: on the assumption that L2 learners have access to UG, and will

notice micro-cues in the input, they should set the microparametric options consistently for different clause types.

4.3.2 Mixed Language: Mutually Inclusive Multiple Parameter Settings

Similarly to Westergaard, Ayoun (1999, 2003) reanalyses traditional parametric structure to accommodate cross-linguistic variation and parametric optionality within a language. There is also a link to the Universal Bilingualism proposal in that Ayoun (2005: 143) proposes that the simultaneous operation of two grammars in true bilinguals can be also be applied to “monolingual” speakers of what she terms “mixed languages”. However rather than explicitly invoking the notion of multiple individual grammars, the traditional notion of exclusively binary parameters with a plus/minus setting is refined to include the possibility that a single grammar may include multiple parameter settings. Thus a “mixed language” may allow “co-existing” parameter settings. “If the two (or more) settings of a parameter can be instantiated in different languages, they may also be instantiated in *different* constructions in the *same* language” (Ayoun 2003: 130). In this sense, English can be characterised as a mixed language with both V2 and V3 properties.

Her suggestions for the nature of parameter setting differ from traditional proposals with binary parameters in the two following respects (Ayoun 2003: 123):²²

- (4.10) 1. Not all parameters are binary, some parameters may be multivalued.
2. Not all parameters are mutually exclusive; instead, languages may exhibit mutually (partially) inclusive parameters settings *for different words*, in the case of phonological parameters, and *for different structures*, in the case of syntactic parameters.

While the traditional binary parameters perspective may be preferable for the sake of theoretical simplicity and from a learnability perspective, Ayoun (2003: 124) points out that the assumption of binary parameters is based to a large extent on the widely invoked ‘switch’ metaphor for parameter setting, rather than on strong empirical

²² I subsume this dual proposal under the term ‘multiple parameters.’ This does not, of course, entail that all parameters must be multi-valued nor that a language may not also have mutually exclusive parameter settings in the traditional sense.

grounds. This metaphor normally states that in the case of language acquisition, the task facing children acquiring their first language is to set the switch to either the positive or negative setting. However, there is no principled reason why a learner should not adopt two distinct settings if sufficient positive evidence exists in the input to support both; although it is not clear what “sufficient” means.

Whatever the necessary threshold of evidence to maintain co-existing parameter settings might be, there appears to be significant empirical evidence for these cross-linguistically. The traditional notion of binary parameters must account for exceptions to each proposed parameter by positing special rules or constructions. The multiple parameters model can simply accept that there are a number of possible parameter settings within a given language and thus the surface optionality follows from this without positing any other special operations.

A relevant example would be verb movement in English in French (see Ayoun 2003: 132-133). Even though English is usually described as a non-movement language and French as a movement language, each actually tolerates a certain degree of optionality. Optionality is particularly the case with French, where thematic verbs may or may not move depending on finiteness and the context, for example there is finite verb movement over the standard negator *pas* but non-movement when the verb is non-finite, but with the negator *personne* (no one) there is movement in both finite and non-finite contexts (Ayoun 2003: 132). These sorts of properties require a certain degree of more or less ad hoc stipulation within the classical parametric view of binary movement or non-movement. By contrast, the Ayoun suggestion is that where a language instantiates co-existing parameter settings, one is set to a major or primary setting and one to a minor or secondary setting. “We are thus able to maintain the original concept of parameter setting as a selection of one setting over another. But we are introducing the possibility that the setting is neither necessarily nor completely excluded within the same language” (Ayoun 2003: 143).

In this way, the well-known difficulties experienced by learners with the resetting of the verb movement parameter are recast as a more subtle problem. It is not simply the case that verb movement transfers or does not. Rather some individual parametric options

might prove more difficult than others. It seems that it is particularly difficult for L1 French speakers to set the non-movement of English verbs over adverbs.

4.3.2.1 Multiple Parameters in SLA

From an inclusive parameter setting perspective, therefore, English could be characterised as a mixed language with co-existing [+V2] and [-V2] parameter settings. This has important ramifications for learnability in the scenario under consideration in the present study, i.e. moving from an L1 with the primary/secondary setting of +V2/-V2 to a second language with the opposite weighting -V2/+V2. Ayoun (2003: 150) observes that precisely this sort of scenario will be most problematic in L2A. She points out that for the acquisition of a language with partially inclusive parameter settings for a given parameter P_1 , there are the possible scenarios in (4.11) (Ayoun 2003: 150).

- (4.11)
1. The L2 presents the same situation as the L1. For example, a Spanish native speaker learns Italian as an L2. Both languages use the [+null] setting as a major or primary setting. There is no need for any parameter resetting. The learner adds the L2 to his or her grammar.
 2. The L2 does not instantiate P_1 at all: the L2 learner adds a new parameter and its setting to his/her grammar.
 3. The L2 does instantiate P_1 but with a different major/minor parameter setting than the L1: this is a more complex case of parameter setting that will result in some delay, but it does not involve resetting either.

Given the learnability considerations that it will be more difficult to acquire a subset property, it is unsurprising that L1 German speakers will have trouble acquiring the V2 system in English and definitively setting the V2 parameter(s) to their target values.²³ Ayoun (2005) conducts an L2 study of L1 English-L2 Spanish learners where learners must acquire a mixed language. English is consistently a non-verb movement language while Spanish is mixed and exhibits [+mvt] with subject floating quantifiers, with adverbs in non-finite contexts; [-mvt] with negation; and optional movement past adverbs in finite contexts and pronominal inversion. The analogy to the L1 German-L2

²³ The Subset Principle was originally proposed for L1A (e.g. Hyams 1986) and stated that children will postulate the most restrictive grammar consistent with the input. If a child postulates a superset grammar, there will be no motivation to retreat from this to the target grammar as positive evidence will not force restructuring to a more restrictive grammar. White (1989: 140) applied this to transfer in L2A and states that “where the L1 has adopted a superset grammar, learners will assume that this superset grammar is also appropriate for the L2 data.” This is in essence a Full Transfer position.

English pairing should be clear: German is consistently [+V2] while English is [-V2] in declarative clauses, [+V2] in interrogatives and with fronted negation; and V2 is optional with stylistic and locative inversion.

Ayoun (2005) administered a range of elicitation and judgement tasks to relatively advanced (3rd/4th year university) L1 English learners of Spanish to test the acquisition of different manifestations of the movement parameter. Predictions included that there would be partial clustering of parametric options if parameter setting is available to L2 learners, and that learners will initially entertain both parameter settings. The results are interpreted as indicating that there were clustering effects for the different properties which appear to show that performance was homogenous for the different subsets of constructions. However, there was variability between the different properties and there was little evidence to assume that the properties which showed optionality in the input were more difficult. For example, the learners' performance was accurate for finite verb movement over adverbs, which is optional in Spanish, while performance on movement in non-finite contexts was not target-like even though there is consistent non-movement in Spanish. It is not clear where these sorts of results leave the mutually inclusive parameters view. One might suggest that mutually inclusive parameters is theoretical overkill for different surface pattern and that in fact exceptional constructions to binary settings are the correct characterisation of this sort of optionality, an issue to which we now turn.

4.3.3 Mixed Languages, Multiple Grammars or Constructions?

Haider (1999: 191) criticises the UB multiple grammars approach by pointing out that the same distinction has already been made with P&P approaches by invoking a core/periphery distinction. A peripheral element might have its own local grammar which may be associated with specific lexical items. He proposes that V2 structures in English are examples of peripheral V2-constructions in an otherwise core non-V2 language. He proposes further that in the course of L1 acquisition everything new may be treated as peripheral by the learners and needs to be integrated into a core grammar. In Chapter 1, we already outlined the assumption that for L2 learners, everything is

peripheral and is never transformed into a core grammar but remains rather a collection of constructions.

Bley-Vroman (2009: 188-200) reviews a range of previous research which has looked at the status of peripheral properties in native languages and draws a comparison with L2A. Of most direct relevance among these are studies by Morgan (1972) and Sobin (1997), who developed the idea of *patches* and *viruses*, respectively (see also Lasnik & Sobin 2000). Sobin (1997) discusses a range of English prestige constructions such as nominative case on coordinate NPs Ex (4.12); nominative objects of comparison Ex. (4.13); or plural agreement in expletive constructions Ex. (4.14), which he suggests are grammatical viruses parasitic on the core linguistic system (from Sobin 1997: 318).

- (4.12) a. Mary and **I** left early.
b. Mary and **me** left early.

- (4.13) a. Mary is richer than **I**.
b. Mary is richer than **me**.

- (4.14) a. There **are** books on the table.
b. There's books on the table.

The prestige variants of these structures (the a. sentences) are not definable in terms of the core generative system of English. These sorts of structures are difficult to control in spontaneous speech, and require tutorial support and conscious monitoring or editing during production, unlike the more natural, non-prestige structures (the b. sentences). These viruses (or *patches* in Morgan's terminology) "must be explicitly learned because, in their natural form, they are lexically specific. Viruses are, in effect, lexically concrete syntactic idioms" (Sobin 1997: 338). The difficulty of control and requirement of prescriptive tutorial support for these prestige forms for native speakers arises because the viral rules cannot naturally be extended beyond their specific lexical items and the extended range of prestige forms are thus unnatural and difficult to control. In a sense, then, prestige variants are like L2s.

Thus, even for native speakers, explicitly learned, lexically-specific constructions must be available as a patch where the generative system fails and cannot accommodate elements in the input which may survive as prescriptive or prestige forms. As Bley-Vroman (2009: 188) notes, the link to SLA is straightforward as native speakers' judgements of prestige forms mirror the variability and indeterminacy typical of L2 learners' production and judgements. The implication is that a general, deductive learning mechanism is not available to L2 learners and thus their entire competence is based on patching together constructions.

Peripheral, or 'viral', features which cannot be accommodated by the core system must be learned in an inductive fashion. An inductive constructionist learning strategy is therefore a necessary component of the language faculty, which might be resorted to by L2 learners. The question that arises with respect to multiple grammars, microparameters and the mixed language proposal is whether or not the same empirical facts are better accounted for as peripheral constructions. Haider (1999: 192) questions "whether the mild defects of grammar called periphery need to be cured with such a strong antidote as universal bilingualism." The same could be applied to the microparametric approach. Recall the formulation of a specific micro-parameter for the lexical item *kanskje* in Norwegian (Westergaard 2008: 1859), which could in effect be reduced to a specific peripheral V3 construction which is lexically specific. Ayoun (2005: 159) also admits a place for the application of inductive rules by mature L2 learners, which may affect the process of grammar restructuring. It is therefore not clear whether assuming a rather baroque cognitive architecture for multiple competing grammars, or a more complex parametric system for microparameters or mixed languages, is entirely justifiable as the same empirical facts can be covered by the constructionist learning of peripheral elements, which is an independently necessary component of linguistic competence.

4.4 Summary

All languages embody optionality to some degree. This chapter has explored proposals that this is due to distinct underlying grammars or distinct parametric options within a single grammar. Thus English can be analysed as having underlying V2 grammars

associated with specific lexical classes or social registers (Roeper 1999). Alternatively, the V2 properties of English can be seen as individual micro-parameters (Westergaard 2007a) or as minor parameter settings. These proposals imply that rather than being acquired as ad hoc exceptions to core grammatical rules, peripheral constructions may themselves be subject to the process of parameter resetting.

One would therefore make predictions for L2A on this basis. On the assumption of parameter setting, it would therefore be predicted that even though there might be variability at the level of the overall linguistic system, each individual mini-parameter should be reset in a consistent fashion. Thus, for L2 English, we would predict that the lack of verb movement with lexical verbs and the raising of *be* would each be set consistently. Similarly, the lack of V2 in declaratives should be reset, while interrogatives would be acquired as V2 and should show no influence of V3 declarative order. Negative inversion as an instance of V2 in declarative clauses should likewise be acquired consistently. In terms of micro-parametric options, once it has been established that the different Force heads are plus or minus V2, they should accordingly give rise to either consistent surface V2 or V3 patterns. There should therefore be evidence of micro-clustering of different properties.

There are methodological problems associated in particular with a multiple grammars approach. Where a language has optional realisations of a particular structure, it is straightforward to assign these to separate grammars in theory but it is a more difficult issue to prove that they do in fact belong to different grammars, and more importantly, it is not clear how it would be possible to disprove the hypothesis (a criticism levelled at the approach by Sorace 2003: 137). Nevertheless, on the Roeper analysis that V2 in English is linked to semantic classes, it could be predicted that if learners follow the same path as L1ers, they will only show evidence of variability with specific lexical-semantic classes of verbs.

5 From V2 to V3: Previous SLA Studies

This chapter presents three representative studies of resetting from V2 to V3 in second language acquisition. From this, and the preceding Chapters on theoretical issues in SLA, we arrive at a set of predictions and hypotheses. The V2-L1s considered in the studies reviewed include Dutch and Norwegian. These are identical to German in the relevant respects.

5.1 Resetting V2 Parameter(s): Hulk (1991)

Hulk's (1991) study of L1 Dutch speakers' acquisition of word order in L2 French is designed to test ideas about the availability of UG in SLA. The guiding research questions were whether L2 grammars are possible grammars in terms of UG and whether or not the developmental stages in L2A are predicted by UG. The study looks at how learners at different proficiency stages restructure the Dutch word order parameters to the French settings, i.e. resetting from head-final to head-initial VP and IP, and, more importantly for present purposes, resetting from a V2 to a V3 grammar. The assumption is basically a Full Transfer model before the hypothesis had been given a name, in so far as the idea is that the learners start out with their full Dutch grammar which must be restructured gradually to the target VO, V3 settings.

The parametric differences in terms of V2/V3 are assumed to lie in two interacting parameters. Firstly, Hulk adopts the notion that the parametric difference in terms of verb placement is due to the location of a finiteness feature on C in Dutch and on I in French. A second parametric difference is the possibility of topicalisation to Spec-CP in Dutch, which is not available in French apart from with *wh*-constituents. It is not clear if French always makes use of topicalisation to CP for *wh*-XPs as this *wh*-fronting does not always give rise to subject-verb inversion. It is therefore possible that *wh*-questions might make use of IP-adjunction in cases where there is no inversion. IP-adjunction is the general mechanism for fronting of constituents in French declaratives, although the fronting of arguments is generally not possible at all. While IP-adjunction is also taken

to be possible in Dutch (5.1), topicalisation to Spec-CP is a requirement in all main clauses.

(5.1) [_{CP} Gisteren _C hebben [_{IP} tijdens de vergadering [_{IP} de meeste mensen zitten slapen...]]]

Yesterday have during the meeting most people sit to sleep.

Given these parametric differences, there is no theoretical motivation to expect the parameters to be reset in any particular order. However, from a learnability point of view, Hulk argues that verb movement to I rather than C in French is probably more easily acquired than the lack of topicalisation to Spec-CP. “If L2 allows less than L1, if it is a subset of L1 in the relevant respect, there will be no positive evidence available in L2 to trigger the resetting of the parameter. From a learnability point of view this will be much more problematic for the L2 acquisition” (Hulk 1991: 7). The evidence from French word order with XSVO sequences should provide evidence that verbs raise to I rather than C. But this does not necessarily entail that verb movement to C is completely abandoned at the same time, as the two settings are not mutually exclusive. That is, XSVO could be analysed as V2, i.e. continued verb movement to C with the subject in Spec-CP but with fronting achieved by adjunction to CP.

The results broadly confirmed the hypothesis that it would be difficult to reset the topicalisation parameter while the verb movement parameter setting is relatively more easily acquired. Hulk (1991: 14) states that “on learnability grounds... a distinction may be made between the position of the head and finite verb movement on the one hand and topicalization to SPEC,CP on the other hand... So, on learnability grounds we might expect that the SPEC,CP parameter will be reset rather late and is even a candidate for fossilization.”

There is a clear developmental trend in the data, whereby third graders on the whole have already set the target option for the headedness of VP and IP. Fronting and topicalisation, however, remain a residual problem, even for learners at university level, 10% of whom continue to accept topicalisation of non-arguments along with verb movement to C. The theoretical underpinning of these results is, however, not entirely

clear. The test sentences for V2 obviously all had the finite verb in C, so it is not immediately obvious why this means that topicalisation to CP is the source of the problem rather than verb movement per se. The argument goes that even though the learners have reset the landing-site of verb movement to I rather than C, these settings do not exclude each other, i.e. there is evidence in French that topicalisation of *wh*-constituents may force movement to C. Thus either I or C may be the target of verb movement in French, with the distinction that movement to C is more restricted in that it only occurs with topicalisation to Spec-CP, which is restricted to *wh*-constituents in native French. To the extent that the Dutch speakers optionally allow the verb to target either I or C, this shows that they have acquired the head movement properties of French. The difficulty is that they allow any constituent to topicalise to Spec-CP rather than only *wh*-constituents. This is a core finding, which can be viewed in the light of the Interface Hypothesis, i.e. that the narrow syntactic principles of verb movement is divorced to a certain extent from topicalisation, which proves more difficult to acquire. There is, however, a problem with the Hulk analysis. The only obvious diagnostic for V2 transfer, i.e. topicalisation is where the verb has moved to C. One should therefore account for why the transfer of topicalisation to Spec-CP forces movement of the verb to C. There is in principle no reason why topicalisation should not transfer without verb movement, which would give rise to target-like V3 on the surface, though with a different underlying structure. This issue is not clarified by Hulk.

Interestingly, it was found that the L1 Dutch speakers on the whole do not in fact allow *any* constituent to be fronted, either by topicalisation to Spec-CP or by adjunction to IP. While resetting the topicalisation parameter proved more difficult, transfer persisted in the main with the topicalisation of non-argumental constituents. The fronting of arguments to Spec-CP was relatively easier to ‘unlearn’. Hulk (199: 16) assumes after Jordens (1988) that this is due to structures with topicalised arguments being “psychologically marked” in some way, i.e. judgements of sentences in the L2 might also tap the learners’ reactions to factors such as the markedness, acceptability or frequency of similar structures in the L1 (see also Kellerman 1985 on psychotypology).

Extending these results to the L1 German-L2 English pair, it is possible to make concrete predictions. For example, in the relevant respects, English is a subset of

German as there is a residual V2 requirement in certain contexts as exceptions to V3. In the same way as verb raising to I does not preclude further movement to C in French, in English the lack of thematic verb movement does not preclude auxiliary raising to C where this is triggered by topicalisation of *wh*- or *neg*-XPs. From a learnability standpoint, it can then be assumed that this will pose a problem to V2-L1ers. While there is ample evidence that thematic verbs do not move in English, copula *be* conforms to V2 distribution and *do*-insertion/auxiliary movement is a requirement in questions to maintain V2 order. Furthermore, the distribution of *be*, auxiliaries and expletive *do* often occur in surface V2 position in declarative clauses and from this point of view, English forms a large subset of German and it will prove difficult to reset the V2 setting. There is therefore reason to assume that the same dichotomy should be in evidence as in Hulk's study, whereby verb movement and the target V2 settings could be acquired at different stages.

5.2 Cue-Based Learning of V3 (Westergaard 2003)

While Westergaard has outlined in detail how the microparametric model can be applied to the first language acquisition of V2 and how V2 patterns can change in languages over time, the approach has not been applied directly to the study of the acquisition of V2 in second language acquisition. In her 2003 study, however, the same cue-based learning mechanism was applied to the analysis of transfer of V2 from L1 Norwegian to L2 English in child learners.

The study again provides evidence in favour of Full Transfer and found "massive transfer" of V2 into L2 English from the lowest proficiency level (first grade) to the higher levels tested (seventh grade) (Westergaard 2003: 85). The results were not statistically significant and it is noted "must be considered tentative until a more comprehensive investigation can be carried out" (p. 80). It must also be borne in mind that there are general problems testing such young instructed L2 learners. The youngest group were excluded from the study as it seemed that they had no knowledge of English grammar whatsoever. This is an indication of the general methodological problem of getting reliable data, especially grammaticality judgement data, from young children with such minimal input. While there was extensive transfer of V2 over all groups, there

was a developmental trend such that the higher levels showed greater knowledge of English word order. Interestingly, there was no such developmental trend with knowledge of word order in questions, which appeared to be mastered earlier by the learners. In addition, on the translation task, the learners performed less accurately on sentences with raised auxiliary verbs as in (5.2) compared to raised lexical verbs.

- (5.2) a. There will we eat a Big Mac and lots of French fries.
b. The spaghetti is Susan eating, not the bread.

The cue-based learning model suggests that a combination of the more marked English system and the fact that the input, both in terms of the frequency of occurrence of certain structures in English as well as the controlled input in a pedagogical setting, makes it difficult for the learners to retreat from a V2 grammar and thus L1 transfer persists. The markedness side of the analysis comes from Henry and Tangney (1999), who argue that a grammar is more marked or complex if it only has movement in certain contexts compared to a language which has movement in all contexts. For example, where English has V2 only in certain types of clause or with certain lexical items, this would be more complex than a language like Norwegian or German, where V2 is more consistent. This is a departure from the more standard view of markedness, which would see a strong feature, i.e. one which forces movement, as the marked option, and a weak feature as unmarked. The corollary of this for acquisition according to Henry and Tangney is that a learner “will only adopt a more complex grammar ... where there is overwhelming evidence in the input in its favour” (1999: 240, cited in Westergaard 2003: 84).

Given the cue-based model of L1 acquisition which Westergaard extends to L2A, it is argued that the evidence for V3 available to the learners in her study is decidedly underwhelming. Assuming Full Transfer, the learner will need two specific cues in the input to move from their L1 V2 grammar to an L2 English non-V2 grammar. SVO is ambiguous with respect to V2, therefore, the necessary cues would be topicalisation to show that English does not have generalised V2, and *do*-support in questions and negation to show that lexical verbs do not move. Topicalisation is infrequent in English, and recall in addition that these are instructed primary-school aged learners with

minimal contact with English. *Do*-support in questions is apparently avoided in the teaching materials used as it is thought to be a complex structure. However, questions with raised auxiliaries do not rule out the possibility that lexical verb might raise, rather *do*-support is specifically necessary as aspectual and modal auxiliaries are in the clause for independent semantic reasons to begin with. Thus given that they have transferred their V2 L1 grammar, there is not enough explicit cues in the English input to which they are exposed to reset to a non-V2 grammar.

There is a general asymmetry between thematic and auxiliary verbs, where V3 is acquired more quickly with thematic verbs, while auxiliaries continue to be raised to C giving rise to V3 for a longer period. However, Westergaard does not build on the distinction between verb movement and V2. While she notes that *do*-support in questions and with negation provides unambiguous evidence that lexical verbs never move, it could of course also be analysed as evidence that English in fact has quite an extensive V2 constraint. S-V_{AUX}-Neg-V_{LEX} and Wh-V_{AUX}-Subj-V_{LEX} can be accommodated by a V2 grammar and might be taken to indicate that V2 in English is simply fulfilled by a mechanism other than lexical verb movement. Thus, on the basis of Full Access/Full Transfer, *do*-support may in fact be interpreted as posing additional difficulty for V2-L1 learners as it often conforms to surface V2 while providing evidence that thematic verbs do not move.

A further issue with the topicalisation and *do*-support cues as formulated by Westergaard is that it is not clear why only topicalisation of objects should be a cue for V3. The original formulation of the global cue for V2 by Lightfoot (2006: 86), $_{CP}[XP\ cV\dots]$, presumably encompasses any type of constituent in Spec-CP. If any XP followed by the finite verb may serve as a cue for V2, I see no principled reason why the cue for V3 should then only be Obj-Subj-V. Nevertheless, a prediction is possible based on the cue-based learning theory, i.e. that frequency effects should be in evidence if the cue-based theory is on the right lines. It is reported that V3 with object topicalisation is more difficult than V3 with fronted adverbials, but that this is only a marginal trend based on a small number of tokens.

This L2A analysis does not draw on V2 microparameters or micro-cues, indeed the Westergaard L2A study pre-dates the publication of the microparameters model. Instead, Lightfoot's (1999) original global cue for V2 is assumed to be necessary to reset to a non-V2 parameter. Recall from above that it was subsequently argued that children acquiring the Norwegian V2 system do so quickly and accurately precisely because there is no global cue for V2 but rather a range of micro-cues for V2 in different clause types. Therefore, when considering the amount of cues available in the input, it gives a truer reflection to count how often V2 occurs or does not occur in a particular micro-context. So while topicalisation may be infrequent in the overall English input, it would be possible to argue that it is more salient for a learner who only considers a specific type of clause in isolation. Westergaard (2008: 1857) comments that "on this perspective, calculating input frequencies based on the total number of sentences... is in fact irrelevant to the explanation of word order acquisition." It is, therefore, not clear exactly what role should be attributed to microparameters and micro-cues in the L2A context.

The micro-cue argument was only advanced as an explanation for L1A and it might be argued that the same operation does not apply at all in the acquisition of a second language. This cannot, however, apply to the learners in Westergaard's (2003) study. It is stated that the youngest learners are six years old and therefore "well within the limits of the critical period for language acquisition" (p. 79). If the learning mechanism based on microparameters is available for first language acquisition, it would then presumably still be available to these learners to apply to the English input. It might then seem surprising that they have such difficulties acquiring the English V2 system. L1 transfer and input are of course complicating factors in second language acquisition. In particular, for the subjects in Westergaard's study, the input is extremely restricted, with only 30 to 60 minutes of English per week at school, and as already mentioned, certain structures may be over- or underrepresented in this input for pedagogical reasons.

While microparameters have not been applied directly to L2A, Westergaard's cue-based analysis of moving from V2 to V3 in L2A makes it possible to make some predictions based on the model. There are distinct cues for verb movement and V2 and, as pointed

out above, the cues for V-in situ might in fact be problematic in that it could be taken as evidence of V2 and thus prolong a period of transfer of V2.

5.3 An Interface Account of V2 Transfer: Robertson & Sorace (1999)

Robertson and Sorace (1999) studied patterns of V2 transfer in L1 German-L2 English interlanguage using corpus and judgement evidence. The empirical findings for which they develop an interface account of V2 transfer are summed up as in (5.3) (Robertson & Sorace 1999: 343).

- (5.3)
1. Learners who use the residual V2 constraint are never a majority at any level. The proportion declines steadily over the course of development but there remains a significant minority who use the construction at advanced levels.
 2. The use of the V2 constraint by those learners who do use it is never categorical, even in the earliest stages of IL grammar, [footnote removed] and it declines in frequency among those who use it over the course of development.
 3. The use of the V2 constraint is restricted to non-thematic verbs; there are no examples of main verb raising in the corpus.
 4. The use of the V2 constraint is clearly due to the influence of the L1 grammar.
 5. The use of the V2 constraint is not motivated by functional, pragmatic or stylistic considerations.

It seems that it is only at the highest levels of proficiency that the English V2 system is target-like, i.e. SAI after fronted negative XPs is produced and accepted as grammatical. Previous stages are the initial state, i.e. Full Transfer from German. In stage one, the VP/IP headedness parameter has been reset but V2 persists. At the second stage, in which most of the participants in the study appear to be, there is an overgeneralisation of V3, whereby grammatical V2 structures such as NI or surface V2 structures such as SI are rejected. While this is the case, it is suggested that the representations underlying this consistent V3 may still involve verb movement to C accompanied by left-

adjunction of fronted constituents to Spec-CP. Only at the final stage do learners recover from the overgeneralisation of V3 and have grammar which is in essence identical to the target grammar.

These developmental stages are to some extent an idealisation as it is noted that word orders are not totally categorical at any stage. This is unsurprising given that variability in parameter resetting has long been established in SLA studies. Robertson & Sorace note that the pattern in their data is reminiscent of patterns of verb raising reported in studies of L1 French speakers acquiring English in that it appears to show “sporadic errors in basic word order” (Robertson and Sorace 1999: 343). They review Eubank’s (1993/4, 1996) proposal to account for optional verb raising in terms of valueless functional features and point to the same problems associated with this approach as discussed in Chapter 1. In addition, they note that the Eubank proposal would not account for the specific patterns in their data, i.e. its developmental nature. Recall that under a valueless features analysis, the tense feature will be ‘inert’ until it is set to the appropriate L2 value of either [+strong] or [+weak]. On the assumption that it is a tense feature on C which gives rise to V2, the problem arises that the developmental data show that there is no cut off point where the value can be said to be reset at which point V2 would no longer be in evidence in the IL. Rather, the occurrence of V2 declines as the level of proficiency in English increases, but it is never definitively expunged from the IL grammar up to the highest levels of proficiency tested by Robertson & Sorace. V2 remains an option even at the highest proficiency levels in the study.

Where it does occur “there is nothing to suggest that the non-subject sentence-initial constituent is being given particular emphasis or prominence in informational terms. This suggests that the explanation for optional use of the V2 construction is not to be found in differences in the pragmatic context or in matters of register or style, although confirmation of this must remain a matter for future research” (Robertson & Sorace 1999: 336). There is no more information to indicate how it was established that there was no particular emphasis or informational status. The very fact that a constituent is fronted obviously means that there is some pragmatic effect being achieved, but unlike Westergaard and Hulk, there is no further distinctions made in terms of the type or function of the fronted XP.

The analysis Robertson and Sorace develop to account for this rests on two main theoretical assumptions:

1. V2 is a reflex of the checking of a strong C feature, rather than a strong V-feature on C.
2. The values of these strong C-features ([+affect], [+wh], [+neg], etc) are abstract lexical items, which are available for selection from the lexicon and therefore may or may not be included in the Numeration in the same way as any other lexical item.

The selection of one of these features for inclusion in the Numeration is determined by the pragmatically motivated choices of a speaker. In German for example, where any constituent is fronted for discourse-pragmatic reasons, the presence of a strong [affect] C-feature then forces overt movement to C for checking purposes. Where the feature is not part of the Numeration it plays no role in the derivation, Robertson & Sorace therefore adopt an asymmetric approach to V2, whereby if there is no fronted constituent, main clauses in German are IPs.

Applying this reasoning to the case of German-speaking learners acquiring English, the assumption is made that analogously to the ‘false friends’ phenomenon, the lexical entries of the strong L1 C-features may be copied from German into the IL lexicon. These ‘lexical entries’ are then available for inclusion in the Numeration and where one is included for specific discourse-pragmatic reasons, it will force movement to C. If it is not included, there will be no overt movement. “Optionality then derives from the exercise of choice at the point of Numeration” (Robertson and Sorace 1999: 353).

The developmental pattern is explained by the fact that in response to TL input an initial obligatory V2 grammar must be restructured as there is ample evidence in English that fronting a constituent in declarative clauses does not give rise to movement to C. The learner therefore learns that the relevant feature should not be included in the Numeration and this is a self-reinforcing learning mechanism whereby lack of use leads to attrition in feature strength (Robertson & Sorace 1999: 354). The learning process for

German speakers targeting English is to establish which C-features are strong (i.e. [neg] and [wh]) and which are not. Notice here that this has much in common with Westergaard's Split-ForceP view that the learner must establish which heads have an [EPP] property and which do not.

The locus of the problem on Robertson and Sorace's (1999) account is therefore syntactic interfaces. One could argue that it is either at the interface of syntax with the lexicon, i.e. the projection of lexical items in the syntax, or at the interface with discourse-pragmatics as the relevant strong features are connected to the exercise of discourse-pragmatic options. Sorace (2005: 64) herself subsequently considers the locus to be the syntax-lexicon interface, but she suggests a reinterpretation which casts the optionality in the light of the syntax-discourse interface. Thus it is suggested that "V2 phenomena are related to the specification of the illocutionary force of an utterance, and ultimately to the speaker's pragmatically motivated choice, for example, the decision to put a constituent in focus, or to topicalise it" (Sorace 2005: 64). English diverges from German in that V2 is, in Sorace's terms "lexically conditioned" in English and therefore restricted to certain types of fronted constituents, while German retains a generalised V2 pattern. One could add here that lexically conditioned may just as well apply to different verb types in so far as specific types of verbs, most notably the copula, but also verbs of saying and reporting may take part in inversion and surface V2. The difficulties for German speaking learners therefore reside at the discourse-pragmatics and at the lexical-semantics interfaces as it requires the mastery of the less consistent syntactic consequences of pragmatic choices in English, as well as the fact that where there is a syntactic requirement for V2, it can only be satisfied by a limited range of types of verbs. Unfortunately this revision in terms of a discourse interface problem is mentioned only in passing in Sorace (2005) and is not developed in greater detail. Despite the lack of specific details, I would argue that an account along these lines is more satisfactory than the more specific earlier lexicon interface explanation in Robertson & Sorace (1999).

The specifics of the Robertson and Sorace analysis throw up some theoretical difficulties. Firstly, their assumption that C-features only force V2 when a non-subject is fronted entails that subject-initial clauses in German do not involve movement to C

contra standard assumptions (cf. Schwartz and Vikner 1996 for arguments against an asymmetric account of V2), and interestingly this is seemingly abandoned by Sorace (2005: 64). Maintaining this position would give rise to further complications. Given the standard assumption that the German IP is head-final, it is not clear how one could straightforwardly derive SVO surface linear order for finite declaratives assuming that the lexical verb in subject-initial finite clauses is in I. In addition, the learning mechanism they propose, i.e. the attrition of feature strength is itself problematic. With regard to Eubank's Valueless Features, they raise the legitimate objection that it is not clear in a minimalist theoretical sense what it means for features to be inert. Similarly, however, it is not clear what it means for a feature to become weaker, which is what they seem to be proposing to account for the developmental pattern whereby the occurrence of V2 decreases as proficiency increases. It is of course possible that by attrition in feature strength, they assume that this means in effect that the feature does not enter the derivation so often as proficiency increases.

5.4 Summary, Predictions and Research Questions

Clear developmental sequences emerge from all these studies. The previous studies of resetting from a V2 to a V3 grammar therefore tend to support a Full Transfer model of the initial state on the assumption that the full L1 grammar, including all functional projections associated with V2, has transferred and forms the initial L2 grammar. The task facing the learner is then to reset to a [-V2] parameter setting. As proficiency increases in the L2, previous research shows that the nature of the target V3 grammar is gradually put in place. However, V2 is not lost in an all or nothing fashion and there is continued optionality of V2 even at relatively advanced levels of proficiency. Despite the distinctions in individual analyses, there is broad agreement that the interfaces seem to play a crucial role in the transfer of V2 at more advanced levels of acquisition. Robertson & Sorace (1999) (and Sorace (2005)) posit that the difficulty is that affect features which force inversion will prove problematic. Hulk similarly makes an important distinction between the position of the finite verb and fronting to Spec-CP. Westergaard likewise shows that thematic verb movement is lost more readily in L2 English compared to the raising of auxiliaries.

The timing of parameter resetting tends to follow similar patterns. There are asymmetries between the types of verbs, at least where English is the target language, whereby the target placement of full thematic verbs tends to be acquired relatively quickly, while auxiliaries may give rise to V2 over a more extended period. No previous studies have tested for L2A the Roeper (1999) proposal that there may be distinctions in V2 according to the lexical-semantics of verbs, whereby equative verbs will tend to give rise to V2. This is tested in the grammaticality judgement task described in Ch. 7.

There may also be asymmetries between fronted adverbials and fronted arguments in terms of whether or not they may trigger the transfer of V2. This distinction argumental/non-argumental distinction is, however, not clear cut. Westergaard suggests fronted arguments may continue to trigger V2 at higher proficiency levels, while Hulk notes that ungrammatical V2 with fronted adverbials are consistently preferred over ungrammatical V2 with fronted arguments, even from the lowest levels of proficiency.

In the present study we zero in on the nature of advanced L2 proficiency. The aim is to study the extent to which residual optionality of word order transfer from German is accounted for by competing models of L2A and is constrained by different linguistic contexts. The assumptions and research questions are outlined below:

1. Is there evidence of an alternative underlying representation based on the L1 that predicts the nature of residual transfer? i.e. Are L1 parameters reset as predicted by Full Transfer/Full Access on the basis of the interaction of the L1 parameter settings, UG and the target language input?
2. Is residual optionality and transfer of indicative of the hypothesis that L2A is fundamentally different from L1A? This assumes that L2 learners must resort to general problem-solving strategies and surface generalisations rather than implicit parameter resetting, i.e. lexically-specific declarative knowledge underlies the L2 rather than implicit knowledge of L2 grammar.
3. Is transfer constrained by interface properties as predicted by the Interface Hypothesis? I.e. are the narrow syntactic properties of [Agr] acquired more completely and consistently than [V2]?

4. Have the English V2 properties been acquired? Is it the case that these properties cluster as predicted by models which assume multiple or micro-parameters? This assumes that the underlying minor parameter settings are also subject to process of deductive parameter resetting as suggested for global parameters.

In the remainder of the thesis, these assumptions and predictions are tested against production data from corpora of written learner English and judgement data from grammaticality judgement tasks. These methodologies permit triangulation of the data, i.e. triangulating production data with experimental test sentences which test relevant structures which may never actually be produced by learners. The experimental data should therefore complement production data by tapping knowledge for which production data might provide only scarce evidence.

The relevant data for the predictions above come from word orders which either implicate the transfer of V2-L1 properties or which indicate the acquisition of target English properties. Findings which indicate that V2 is in evidence in patterns which conform to a UG-sanctioned interaction of L1, input and natural language parametric options would support a FT/FA global parameter resetting model. By contrast, if the L2 system cannot be characterised in such a way, this would falsify the proposal that the deductive parameter resetting process is at work in L2A. This would then be taken as indirect evidence that L2A is “fundamentally different” to L1A, i.e. unlike L1A, L2A is not the result of a language-specific mental module but rather is driven by general cognitive mechanisms such as associative learning based on categorisation and analogical extension and similar processes. This sort of process has been formalised as a constructionist approach by Bley-Vroman (1997, 2009) and Herschensohn (2000). Direct evidence in support of this sort of approach would be evidence that word order patterns are put in place in a piecemeal fashion as lexically-specific constructions are progressively added to the grammar or extended to accommodate more English input.

Although it has been couched solely against the background of a parameter resetting model, the Interface Hypothesis is in principle amenable to either a parameter setting or a constructionist approach to L2A. In either case, it would predict that structures which are linked to the interfaces of syntax with discourse-pragmatics, semantics, etc. will be

more difficult to acquire than purely syntactic structures. In concrete terms, we would expect thematic verb placement to be more accurate than V2 inversion. Similarly, the syntactic properties of inversion in English should be more target-like than the interface properties. For SI, this means that the syntactic constraints on the verb's projection in syntax will be acquired before the discourse constraints on inverted and pre-posed constituents.

The interaction of different surface word order patterns will have a bearing on which hypotheses are most realistic. For example, if there is no thematic verb movement in sentential negation contexts but thematic verb movement in V2 inversion transfer structures, one must assume a disconnect in the verb movement parameter. Thus we must assume either that parameters are not at work or that there are distinct separate grammars for different linguistic structures, à la Roeper (1999). For the reasons cited above, it is virtually impossible to test the multiple grammars proposal and so this sort of result would indicate that constructionist, item-based learning of different structures is at work.

A final point must be made with respect to the role of language instruction. The role of explicit teaching is generally not taken into consideration in theoretical SLA research, perhaps due to the fact that especially generative theorists assume instruction to be a peripheral phenomenon compared to the central importance of mental representations of language and implicit *acquisition* in contrast to learning. However, as Herschensohn (2000: 205) observes, even within a Minimalist approach to SLA, it is surely more realistic to assume that learners will make use of explicit grammatical knowledge and language instruction in their knowledge of the L2. In a way, this already presupposes a more constructionist learning perspective. In any case, given that the learners in the present study (as in most SLA studies incidentally) are all instructed learners, one must be mindful of the possible role of explicit taught knowledge of grammar. Depending on whether one favours a deductive parameter setting approach or a constructionist approach, this sort of explicit grammatical knowledge will be viewed either as an interference with the innate system or as a central component of a piecemeal learning strategy.

With these predictions and hypothesis in mind, we turn now to the empirical studies. The next two chapters outline the methodology adopted in the corpus study and judgement study before we return to the results and their ramifications for the different models explored thus far.

6 Method and Materials: Corpus Study

The following sections provide an outline of the make up of the corpora used in the study. This is followed by the methodology used to identify the sentences of interest which act as diagnostics for the transfer of V2 or are informative as to the extent to which the V2 properties of English have been acquired. Because there is a certain amount of overlap in the surface diagnostics, which could be either transfer or instances of English word order variation, a range of variables were coded in order to facilitate analysis and permit a distinction to be drawn between those tokens which are target-like usages of English word order possibilities and those which are non-target word orders which could be indicative of transfer.

6.1 Materials

6.1.1 The International Corpus of Learner English and Contrastive Interlanguage Analysis

The version of the ICLE (Granger et al 2002) used is made up of 11 distinct subcorpora each representing a different L1 background (Bulgarian, Czech, Dutch, Finnish, French, German, Italian, Polish, Russian, Spanish and Swedish) and amounts to approximately 2.5 million words of text. A subset of these L1 subcorpora was chosen for the present study (see below).

The ICLE data is in the form of elicited written production from undergraduate students in their third or fourth year of study in university degree programmes in English language and literature. The corpus co-ordinating team provided a list of suggested essay titles covering descriptive and argumentative topics on current issues in society and culture (see Appendix 2 in Granger et al 2002). The most frequent title used (12.4% of the total number of texts) was “Some people say that in our modern world, dominated by science, technology and industrialization, there is no longer a place for dreaming and imagination. What is your opinion?” A range of additional titles was used by the national corpus collectors. The institutional level of the students is the criterion by which the learners in ICLE are defined as ‘advanced’, which might in some ways be

unsatisfactory as a measure of proficiency in the L2 (see Section 6.3 for discussion.)
The design criteria for the whole corpus are given in Figure 6.1.

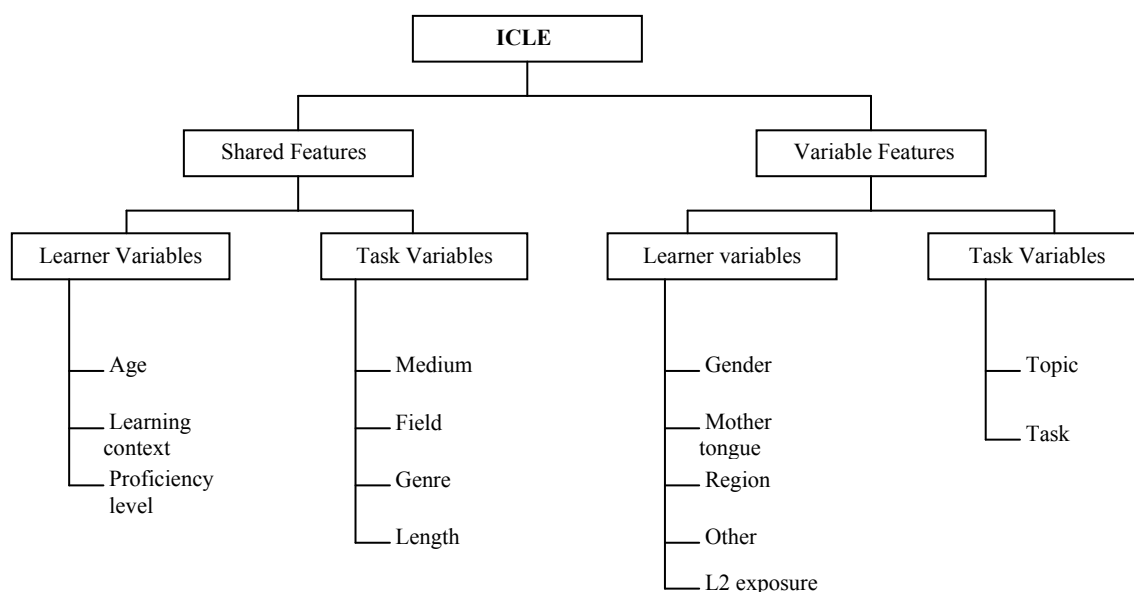


Figure 6.1: ICLE Learner and Task Variables

Granger (1998: 12) observes that a learner corpus such as ICLE lends itself to a contrastive approach to learner language and she notes that Contrastive Interlanguage Analysis (CIA) can be used to differentiate between interlingual, i.e. transfer errors, and intralingual factors, the problem is confined to the difficulties due to the structure of peculiarities of the target language in question. This of course must be differentiated further to account for areas in which intralingual factors may be compounded by interlingual factors and thus give rise to more subtle qualitative or quantitative distinctions between the production of different L1 groups. Gilquin (2001, 2008) develops a more detailed model of contrastive analysis on the basis of large corpora with six possible types of comparisons, for example, straightforward contrastive analysis, e.g. English compared to German, comparison of native L1 to interlanguage, etc. For present purposes, the methodology adopted is that which compares the interlanguage of different L1 learner groups to each other (and implicitly to the target norm).

- i) NL vs. IL, i.e. comparison of L1 English and learner English;
- ii) IL₁ vs. IL₂, IL₃..., i.e. comparison of different interlanguages.

The technique could in principle be used to compare any number of variables which define different learner corpora, for example comparing corpora produced by learners with the same L1 but at different stages of proficiency, or with different socio-economic backgrounds, to discover how exactly such variables might affect the production or acquisition of particular L2 features. For the present study, the relevant factor is the influence of the L1 on the production of V2 structures in L2 English. A comparative approach in this respect is important because English requires V2 in some instances and allows functionally motivated inversion in others and so a reasonable hypothesis would be that certain word order phenomena prove invariably problematic cross-linguistically and might induce learners to produce apparent V2 structures based on the input rather than as an effect of L1 influence.

While this sort of cross-linguistic hypothesis might be reasonable, it would obviously be intuitively more plausible that non-target V2 structures will be in evidence in the production of V2-L1 learners due to the influence of the L1 while not in the production of the other L1 groups. This would be confirmed by the comparative approach if V2 diagnostics are in evidence in the V2-L1 groups but not in the other subcorpora and if the sort of V2 diagnostics found in the V2-L1 groups is absent or differs qualitatively from comparable structures in a corpus of native English.

A final point is in order on the general use of learner corpora in SLA research. Granger (2002: 5) notes that “[m]uch current SLA research favours experimental and introspective data and tends to be dismissive of natural language use data.” This is perhaps due to the competence/performance dichotomy, especially within the generative paradigm but also more generally (see Gregg 1989: 20-22), and the fact that the aim of SLA research within this approach is to model the underlying representations (i.e. competence) at a certain stage in development. The assumption, then, is that this is best studied by attempting to tap underlying competence more directly with experimental techniques. Furthermore, the sort of structures one might be interested in testing may not occur frequently enough in production to permit analysis. Nevertheless, production data has been used in generative SLA research (viz. the various initial state theories based on spoken production data). In fact, Myles (2005: 374) claims that “language produced by learners, whether spontaneously or through various elicitation procedures

remains a central source of evidence [...] and the success of SLA research therefore relies on having access to good quality data.” ICLE provides suitable data for a large number of learners and thus enhances that generalizability of any results.

A final caveat relates to the status of written data as opposed to spontaneous spoken production data. It should be pointed out that the written mode will obviously afford more time in production and perhaps a possibility to apply learned metalinguistic knowledge. While this might therefore present a picture which overestimates the learners’ competence to a certain extent and mask some aspects of the underlying competence, it can be assumed that those structures which are in evidence in the corpora truly reflect the learners’ knowledge as they are not only produced but also pass metalinguistic filters. In addition, grammaticality judgments serve to triangulate the data by testing structures which might not necessarily be produced. Finally, on practical grounds, as many inversion structures in English which are of interest here are confined in the main to the written mode, it is possible that these constructions would simply be absent from spontaneous spoken data.

6.1.2 The ICLE Subcorpora in the Present Study

The Bulgarian, Dutch, Finnish, French, and German L1²⁴ subcorpora of ICLE were used for the analysis in addition to a further learner corpus compiled specifically for the current study in order to provide a further point of comparison with L1 German production. For the purposes of the analysis, the corpora can be divided into V2-L1 (L1 German and Dutch) and non-V2-L1 (L1 Bulgarian, Finnish and French). The learner variables for each of the corpora are given in Table 6.1.

²⁴ Abbreviated in what follows to ICLE-BU, ICLE-DU, ICLE-FI, ICLE-FR, ICLE-GE.

<i>Corpus</i>	<i>Average Age</i>	<i>Percentage Female</i>
ICLE-BU	20.55	83%
ICLE-DU	20.67	73%
ICLE-FI	22.73	85%
ICLE-FR	21.70	88%
ICLE-GE	23.39	78%

Table 6.1: ICLE Learners Bio Data.

The CD-Rom interface provided with ICLE allows the researcher to tailor the various subcorpora according to the design criteria outlined in Figure 6.1. The version of the subcorpora used in this study contained only those essays written by monolingual native speakers of each of the L1s in question. The texts of any participants who listed a second native language spoken at home were excluded. The filtering criteria for each subcorpus were therefore the native language plus no second or third language spoken at home. This resulted in the final make up of the ICLE corpora used in the study as outlined in Table 6.2.

<i>Corpus</i>	<i>No. of Texts/Participants</i>	<i>Number of Tokens</i>
ICLE-BU	294	196632
ICLE-DU	247	218555
ICLE-FI	244	182540
ICLE-FR	274	184132
ICLE-GE	407	221621
Total	1466	1,003,480

Table 6.2: Make up of the ICLE Subcorpora as used in the Study

No other filtering criteria were applied to the corpora. The possibility of interference from other learned foreign languages could not be controlled for because of practical considerations. Only 489 of the essays in the whole ICLE were written by participants with no learned foreign language other than English. By way of example, of the 407 German essays included in the subcorpus for analysis, adding the further filtering criterion “none” for other foreign languages learned would have yielded just 59 texts. Nor would it have been practical to try to control by using the same learned foreign languages as a filtering criterion for all the subcorpora. French is the most frequent learned second language in ICLE as a whole but even choosing French would have proved highly problematic given that there is obviously regional variation in the choice of foreign language taught in school, for example, taking French as the filter for other foreign language would have yielded 242 essays from the German component but only 8 from the Bulgarian. Added to that, the problem of maintaining the array of second, third, etc. languages constant would have led to data so restricted in scope that it would not be usable in any meaningful way.

All the participants in ICLE are instructed learners of English as a foreign language with varying amounts of exposure to the target language through formal instruction and time spent in an English speaking country. Table 6.3 outlines these variables. Given that there is some variation in the length of time spent learning English, it would be more appropriate to speak of upper-intermediate to advanced learners in ICLE rather than just advanced. Granger et al (2002: 14) also point out that this is perhaps a more suitable label given the individual variation between the participants and their different experiences of formal teaching. I do not consider the amount of time spent in an English-speaking country to have a significant impact on the proficiency of the learners considered as a group. The vast majority of the learners report spending less than 3 months in an English speaking country and a significant proportion report spending no time at all in an English-speaking environment.

<i>Corpus</i>	<i>Ave Years of Instruction (years)</i>		<i>Ave Length of Stay in English-speaking Countries (months)²⁵</i>
	<i>School</i>	<i>University</i>	
ICLE-BU	7.1	2	0.5
ICLE-DU	5.3	2.2	1.7
ICLE-FI	9.7	1.5	6.0
ICLE-FR	4.5	3.5	1.1
ICLE-GE	5.4	2.3	4.5

Table 6.3: ICLE participants' exposure to English

Other than foreign and second languages, the essays taken from the various components of ICLE had the characteristics outlined in Table 6.4. These profiles of the corpora are given for the sake of completeness as it assumed that the effects of these task variables such as genre of writing, timing of writing, etc. will have no significant effect on the production of the grammatical structures under investigation. Similarly, the timing of essay writing or whether or not they are produced under examination conditions will have no significant influence on the production of the relevant structures.

<i>Corpus</i>	<i>Genre</i>		<i>References Tools</i>		<i>Examination</i>		<i>Timing</i>	
	<i>Argumentative</i>	<i>Literary</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>Timed</i>	<i>Untimed</i>
ICLE-BU	294	0	263	31	294	0	0	294
ICLE-DU	237	10	31	222	174	33	14	207
ICLE-FI	219	25	54	189	204	32	39	201
ICLE-FR	230	44	5	251	200	51	46	219
ICLE-GE	393	14	179	207	218	150	163	211

Table 6.4: Task Variables in ICLE Subcorpora²⁶

²⁵ The large proportion of the ICLE participants overall reported spending no time in an English speaking country (43%). The range of variation between individuals is wide.

Certain caveats do, of course, apply with respect to the extent to which transfer could be expected in the different essays. For example, it is possible that written production which is produced in an examination setting may be representative of striving for “correct” English and thus be submitted to conscious self-correction stemming from explicit learned grammatical knowledge. The same caveats apply to the examination condition variable. It is likely that when essays are to be assessed as part of an examination, the learners are more likely to pay more attention to producing grammatically correct English and therefore will consciously apply learned grammatical knowledge while this will perhaps be less likely where the learners know that the work will not be officially assessed and graded. On the other hand, these external criteria also serve to add to the production pressure and may give rise to more production errors. Either way, however, it is more likely that these sorts of factors will only affect the quantitative occurrence of possible transfer effects rather than qualitatively skewing the data to a significant extent. If a learner’s grammar at a particular point in time includes a (residual) V2 constraint, it is to be expected that the occurrence of V2 structures in the L2 will not be recognised as ungrammatical. This is the same rationale which underpins acceptability judgement tasks. In any task, whether judgement or production, it is in principle possible that instructed learners may employ explicit learned grammatical knowledge.

6.1.2.1 Corpus Annotation and Mark-up

All the ICLE texts are in ASCII format with minimal mark-up. Each text is tagged with a unique code denoting the first language, the institution which contributed the text and a batch number for when the text was added to the corpus. I will adopt the convention of using the simplified codes outlined above to refer to the source of material quoted directly from the corpora (i.e. ICLE-GE, etc). The only other mark-up included in ICLE are tags representing deleted direct quotations or bibliographic references: <*> or <quote> and <R> respectively. For those texts which were not submitted in electronic

²⁶ Where the figures here do not equal the total number of texts in each of the subcorpora, this reflects a small fraction of texts where the status of one or other of the task variables is listed as “unknown” in ICLE.

format but rather transcribed by the corpus compilers, the code <?> serves to mark a word that was illegible in the original text.

For the present study, further mark-up was added to aid retrieval of syntactic strings. Each of the subcorpora used was part-of-speech tagged with the CLAWS7 tagset using the POS tagger available in WMatrix (Rayson 2003, 2008). As the procedure for identifying inversion structures and other diagnostics for V2 relied on being able reliably to extract POS-tag sequences, a possible problem could be the accuracy of the tagger. Previous research has shown, however, that CLAWS7 achieves an accuracy rate of 96.3% on learner English data (van Rooy & Schäfer 2003). While this overall accuracy rate would be satisfactory for tagging reliability, the research reported there raises another issue for the present study as it shows that the tags with the lowest precision rates in CLAWS7 are RRR and RGR (i.e. the tags for adverbials), which might have a bearing in particular on being able to extract verb-adverb-object sequences. To investigate the possible effects of this sort of error, a sample of the tagged WUCLE corpus was edited manually to check for the accuracy of identifying and tagging adverbs. This procedure showed that the lack of precision tends to be due to tagging non-adverbial elements as adverbs rather than mistagging adverbs themselves as something else. This sort of minor inaccuracy can obviously be discounted as a significant problem for present purposes as manual sorting of the sentences extracted using tag sequence searches will catch this sort of error.

6.1.3 WU Corpus

An additional L1 German learner corpus was collected from among the same student groups who participated in the grammaticality judgement task (although the students who contributed to the corpus did not also complete the judgement task). The corpus was collected over three semesters between 2006 and 2007 at the Vienna University of Economics. The WUCLE²⁷ corpus is made up of term papers submitted by students taking part in English language seminars as part of their university course in International Business Administration. Total word count for WUCLE is 176,843 tokens

²⁷ On the derivation of this name: Vienna University of Economics and Business > German *WU* (*Wirtschaftsuniversität*) *Wien* > WU corpus of learner English > WUCLE

made up of 62 individual texts. The texts were on average longer than the ICLE texts. The external criteria in terms of length of texts, etc. were the same across all the groups from which papers were collected and did not permit any changes for the purposes of the corpus collection procedure to allow greater comparability with ICLE. Submission of papers for inclusion in the corpus was voluntary, students were contacted by e-mail and given information about the research project and how to submit papers if they were willing to take part. Collection of the papers for the corpus took place before any feedback, grading or correction. All papers were submitted in electronic format and converted to ASCII.

Each of the 62 participants who contributed texts to WUCLE also filled in a background learner questionnaire to provide biographical details and information on their educational experience and exposure to English. All participants were monolingual L1 speakers of (Austrian) German.²⁸ The biographical information is summarised in Table 6.5.

	<i>Average Age</i>	<i>Gender</i> <i>Male/Female</i>		<i>English Instruction</i> <i>(years)</i>	<i>Time in English-speaking country</i> <i>(months)</i>
WUCLE	24.2	24	38	13.6	2.4

Table 6.5: WUCLE Participants' Biographical Information

It should be noted that the number of years of instruction in English includes both school and university level. While English is a compulsory subject for students following the International Business Administration degree course, it is not necessary to take English courses in every semester. It is, however, possible to take optional English courses but without sitting an exam and receiving a grade. Post-questionnaire enquiries from participants revealed that this may have caused some confusion in terms of what counted as time spent studying English at university. This, along with the fact that the average age of WUCLE participants is higher than in ICLE, might also explain the on

²⁸ The variety of German is irrelevant as far as V2 is concerned. All dialects have the V2 constraint in main clauses.

average lengthier experience of instruction in English in WUCLE compared to the various subcorpora of ICLE.

All participants in WUCLE had followed the compulsory components of the English language course at WU Vienna, which they must pass to be admitted to the seminar classes from which the texts were collected. These compulsory courses involved English Business Communication 1, 2, 3 and 4. The earlier courses (EBC1 and 2) provide a consolidation in grammar and general English language, while the latter courses concentrate on specific terminology and skills required for the International Business Administration degree, i.e. financial, export and marketing terminology, and communicative genres such as letter writing, report writing, financial reporting, etc. The compulsory courses amount to 14 credits in the European Credit Transfer System (ECTS), which should correspond to a workload of 350 hours of English over the course of the learners' university careers. It should be noted that while the ICLE and WUCLE learners are comparable in terms of their overall educational level, the details of their respective experiences with English will have been different. It is to be expected that the ICLE learners had more instruction as they were students of English language and literature. The WUCLE learners, however, followed by comparison a more restricted course. In addition to differences in terms of the absolute amount of exposure, the input each group of learners received was likely qualitatively distinct. The ICLE learners would obviously have extensive exposure to a wider range of genres of English, specifically literary and narrative styles where word order variation such as SI is more likely to occur. The WUCLE learners, as outlined above, followed a course in English for specific purposes where the exposure to these types of genres and structures would be more restricted.

As previously alluded to, the papers included in WUCLE were eventually submitted for course credit for an English language seminar. The task variables for the papers were therefore set for the classes for which the papers were written. The texts were limited to a maximum of 3000 words and were written with access to language reference sources. The average length of the texts in WUCLE is 2852 words. Genre is not included among these variables and it is difficult to assign the papers in the WUCLE to any specific genre. The aim of the text is to report on research carried out during the semester and

the genre may therefore range from argumentative to descriptive or a more technical type reporting of research.

6.1.3.1 Corpus Annotation and Mark-up

After being converted to ASCII format, all extraneous formatting was removed from the texts. Pagination and titles were removed as were bibliographic references. Following the ICLE procedures, where there were direct quotations, these were removed and replaced by the tag <*>. Each individual text in the corpus was also tagged with an anonymised code (e.g. <WU1>) to allow it to be identified with its author in the database of learner profiles. As with the other ICLE subcorpora, WUCLE was POS tagged with the CLAWS7 tagset in WMatrix.

6.1.4 LOCNESS

The final component of the contrastive interlanguage model is the native target-language reference corpus. The Louvain Corpus of Native English Essays (LOCNESS) is used for this purpose. LOCNESS is made up of written texts produced by native English-speaking school pupils and university students in the United Kingdom and the United States. Specific biographical information is not available for the participants in the corpora, although this is not of direct relevance for the native speakers. The make up of the corpus is outlined in Table 6.6.

	<i>No. of Texts/Tokens</i>			<i>Total Word Count</i>
	<i>US University</i>	<i>UK University</i>	<i>UK School</i>	
LOCNESS	114/ 168400	90/ 95695	232/ 60209	324,304

Table 6.6: Make up of LOCNESS

For the present study, there is no distinction made between the British and American components of the corpus as there is nothing in the descriptive or theoretical literature to suggest that one should expect differences between British and American English

with respect to inversion or any other structure relevant to the research design such as interrogative syntax, adverb placement, etc.

Detailed information is available on the genre of the essays in LOCNESS and this is outlined in what follows for the sake of completeness. The difficulty of assigning texts to a particular genre is acknowledged in the categorisation information available on the website accompanying LOCNESS: “not really argumentative, answers to 5 exam questions”, “mixed: about literature but most are rather argumentative” are typical descriptors (LOCNESS Project website).

<i>US University</i>		<i>UK University</i>			<i>UK School</i>
<i>Argumentative</i>	<i>Literary</i>	<i>Argumentative</i>	<i>Expository</i>	<i>Literary</i>	<i>Argumentative</i>
149574	18826	19019	18129	58547	60209

Table 6.7: Genre Variables in LOCNESS

Genre would be important for corpus studies of lexis and phraseology where issues of overuse and underuse in native compared to learner production would be of central importance. I would argue that genre and the other external task variables such as timing and whether or not the work was for examination would not have any impact of the type of grammar produced by the native speakers. Other detailed information on the tasks in LOCNESS is therefore not included. LOCNESS was POS tagged in the same way as the other corpora and, again, no other mark-up or annotation was used.

6.2 Method

The sentences to be analysed were identified semi-automatically. Given that the corpora are not parsed, sentences were extracted using POS tag searches in the batch search facility in MonoConc Pro 2.2 (Barlow 2002) and these were then sorted manually to arrive at the final dataset. Inversion was identified by concordancing the tag VV* for all forms of finite lexical verbs. All concordances were then sorted and only those tokens where the subject was in postverbal position were added to the dataset. All interrogatives were extracted by searching for interrogative punctuation. Negative

Inversion structures were identified by searching for fronted restrictive adverbials and fronted negators: *neither*, *never*, *no*, *nor*, *not*, *only*, *rarely* and *seldom*. The search terms for the remaining diagnostics in declarative clauses are given in Table 6.8.

	<i>V2 Diagnostic</i>	
	<i>V_{LEX}-Neg</i>	<i>V-Adv-Obj</i>
<i>Tag Sequence Searches</i>	VV* XX ²⁹	V* RR
	VD* XX	V* RP
	VB* XX	V* RT
	VH* XX	

Table 6.8: Batch Searches for Verb Movement Diagnostics over Negation and Adverbs

The search terms were general in order to retrieve all possible instances of the linear orders of interest. These POS searches therefore naturally produced a large number of concordances which did not have any bearing on the V2 diagnostics. Apart from simply disregarding those concordances which were overgenerated by the search terms, the manual sorting procedure employed a number of criteria to filter the concordances and to arrive at the final set of sentences to be analysed. The filtering criteria applied to each of the different types of sentences are outlined in what follows.

6.2.1 Restricting the Dataset

All sequences with a non-subject clause-initial constituent followed by a thematic or auxiliary verb followed by a subject were included in the initial inversion dataset. This set of sentences was then further reduced by discounting a range of surface V2 structures from the final dataset.

²⁹ This is the only sequence which directly identifies lexical verbs preceding negation; the others identify patterns of auxiliary verbs preceding negation. XX is the tag for *not*, VV for thematic verbs, VB* for forms of *be*, VD* for forms of *do*, VH* for forms of *have*.

Any instances of quotative inversion were discounted at the initial stage. Even though Roeper (1999) refers to quotative inversion as a V2 grammar for English, QI appears to be truly optional in English without any properties regulating its use in context and thus there are no properties which would permit an analysis of what constrains QI for the different learners. Inversion in positive rejoinder echo-clauses with auxiliary verbs of the form *so do I* or *as would she* were also disregarded at this stage and not included in the analysis.

One final category of possible inversion structures which were not included deserves mention and explanation, namely inversion in copular sentences as in Example (6.1). The underlying structure of these sorts of sentences and whether or not one can even speak of inversion as the correct analysis of the derivation of the type of sentence discussed here is a matter of debate in the literature (Moro 1997, 2006; Heycock & Kroch 1999a & b).

(6.1) The cause of his illness was this virus here.

What caused his illness was this virus here. From Heycock & Kroch (1999: 71)

The issue is whether these types of sentences should be considered the inverted form of “This virus here was the cause of his illness” and “this virus here was what caused his illness”? The voluminous theoretical literature on pseudoclefts, predicate raising and copular sentences suggests syntactic tests which might be used to establish the status of the NPs in this type of sentence (Moro 2006). However, in addition to the fact that these sorts of tests are not always readily applicable to natural production data, a further difficulty is that there is no general agreement on the correct analysis of the results of the various tests. Given then that there is no general agreement on whether or not sentences like those in Ex. (6.1) are inverted and if so, what syntactic operation gives rise to the inversion, no sentences of the form DP1-*be*-DP2 or Wh-Clause-*be*-DP were included in the study.

All sequences where an adverbial intervened between a thematic verb and its object were also initially included in the dataset and then subsequently sorted to remove a number of tokens. In the main, those instances were disregarded where there was

possible confusion over the scope of the intervening adverb or its incorporation into the sentence structure. Obviously, where the adverb is part of the following XP and modifies that category, these sequences were discarded. As in Ex. (6.2), adverbs in VAO may take narrow scope of the following object.

- (6.2) What is more, crisis communication is not restricted to the time when the crisis comes up, but it is a continuous process and includes also the time during and after the crisis. (WUCLE)

Interestingly, there are instances of VAO involving primarily restrictive adverbs such as ‘only’, ‘also’ and ‘even’ where the adverb would require preverbal placement giving it sentential scope. Even in these cases, it is assumed that the problem is with the scope relations rather than due to the verb having moved over the adverb. Such examples are perhaps indicative of more general problems with the placement and scope of this type of focussing adverb. As illustrated in the Exs. (6.3-6.6) the learners may place such adverbs in positions which do not establish the appropriate scope relations and are therefore anomalous in context.

- (6.3) On the one hand MNCs cannot only be blamed for these negative developments. (WUCLE)
- (6.4) This even might undermine development efforts. (WUCLE)
- (6.5) There might be also some advantages of marriage, which I have difficulties to accept. (ICLE-GE)
- (6.6) To my mind not even the members of the Supreme Court have the right to impose the death penalty on a criminal, because also they cannot pass an absolutely unfailing judgement whether the perpetrator is guilty or not. (ICLE-GE)

The second type of sequence which was disregarded was where the intervening adverb could plausibly be phonologically offset and therefore not incorporated fully into the clause in the position where they surface. This mainly affected discourse adverbs as in Ex. (6.7), which tend to surface in this position.

- (6.7) This has however an immense power for misuse. (LOCNESS)

6.2.2 Data Analysis

All the sentences in the final dataset were coded to facilitate analysis. The interface conditions on the production of word order variation in English discussed in Chapter 1 form the theoretical basis and rationale behind many of the decisions taken in terms of how to code constituents in the XVS sentences. As SI, and VAO in the form of NP-shift, are both possible in English, this coding is also designed to allow a more fine-grained analysis of the different factors which might influence the occurrence of word order variation in the corpora and separate out target English V2 properties from non-target structures which might reflect transfer and to isolate those examples which would seem to be instances of V2 transfer.

Interrogatives

Every question in the corpora was coded for whether or not it displayed the following syntactic properties:

- i) target English auxiliary T-to-C (Aux Move)
- ii) lexical verb movement (Lex Move)
- iii) non-movement of any verbal elements (In Situ)

This permits a consideration of whether or not target English (residual) V2 in the form of interrogative SAI has been acquired. It also permits an analysis of the extent to which thematic verb movement might continue to be in evidence in the English of the L1 German speakers.

Negative Inversion

In order to analyse the extent to which the learners have productive knowledge of NI, all possible NI contexts were identified by searching for occurrences of preposed negation or restrictive adverbs. Clauses with initial XPs containing *neither*, *never*, *no*, *nor*, *not*, *only*, *rarely* and *seldom* were extracted. These were then subsequently manually sorted to identify those sentences where NI would be a requirement in English. Each of the sentences was then coded as with questions for the presence of

- i) auxiliary T-to-C (AuxMove)
- ii) inversion of thematic verbs (LexMove)
- iii) lack of inversion (In Situ)

It is therefore possible to establish whether the negative inversion requirement has been put in place in all contexts.

Stylistic Inversion - Verb Type

In general it is necessary to distinguish between instances of stylistic inversion and possible instances of the transfer of V2. This distinction can be judged by examining the extent to which the X-V-S structures conform to the constraints on SI in English. In addition, given the hypotheses outlined in Ch. 5, we would expect that the syntactic constraints on SI, i.e. the type of verb which is licit in the structure would be more easily acquired than the interface restrictions on the initial constituents and the status of the inverted subject (see below).

As discussed, the lexical-semantics of verbs has traditionally been assumed to play a role in regulating the felicity of SI in English in that unaccusatives are acceptable when inverted with their subject, while other types of verbs are not. However, as was also highlighted previously, this distinction is problematic as it has been shown that the verb in felicitous SI need not be unaccusative. The conclusion drawn earlier was that while finer distinctions become problematic, it seems empirically sound to assume that inversion is illicit in English with transitive verbs which appear with their objects. Thus the verbs in X-V_{LEX}S structures were coded as either ‘transitive’ or ‘intransitive’. Where inversion occurred in a periphrastic tense, verb-type was coded if there was full inversion, i.e. if the subject came after both the auxiliary and main verb. Where only the auxiliary verb and subject were inverted, the verb was coded as ‘aux’; there was no distinction made between modal or aspectual auxiliaries. Where full inversion occurred with a passive construction, i.e. after the passive auxiliary and the main lexical verb, it was coded as ‘passive’.

Stylistic Inversion - Initial XP

The initial constituent in XVS sequences was analysed in the first instance as Argument, Adjunct, Adjectival Predicate or VP. The adjuncts were then further distinguished in terms of function and syntactic type. In practice, this meant that they were coded as follows:

- i) Discourse Adverbs; Discourse PPs
- ii) Temporal Adverbs; Temporal PPs
- iii) Locative Adverbs; Locative PPs
- iv) Frequency Adverbs

This permits a qualitative comparison of the occurrence of inversion in the V2-L1 corpora as compared to the non-V2-L1 groups. A V2 constraint active in the interlanguage would require inversion after *any* initial non-subject XP while it might be expected that other non-V2 L1 learners who have not mastered the complexities of inversion in English would nonetheless approximate the rules for inversion in English declaratives by producing inversion only after a restricted number of types of initial XPs, e.g. negation, locative PPs.

For the instances of inversion around copula *be*, a more fine-grained coding of initial constituents was undertaken. This is due to the fact that *be* can take part in a wider range of inversion structures as complements of various types can be fronted giving rise to the inversion of the subject. Given the fact that a greater selection of different XPs may be fronted in these contexts, the coding scheme was based on the sorts of fronted constituents which actually occurred in the corpora, rather than setting up a scheme in advance (see Results).

Stylistic Inversion - Weight

The weight of the inverted subject was recorded only in instances where the inversion involved the subject and the full thematic verb (6.8a). Inversion around auxiliaries was not coded for the weight of the subject (6.8b). Where inversion involves auxiliaries, the syntactic mechanism underlying this is T-to-C movement rather than possible non-canonical placement of the subject due to its weight or information status.

- (6.8) a. Next door to me lives a typical representative of this kind. (weight = 6)
 b. Therefore should TV commercials be banned. (ICLE-GE)

Weight was operationalised simply as the number of words used to express the inverted subject. As highlighted in the discussion of interface conditions on English inversion, the weight factors which influence word order variation are complicated and various

elements seem to play a role. Wasow's (2002) comparison of various measures of weight shows that word count is a reasonable indicator of the heaviness of a constituent and when it might be shifted. However, this measure alone ignores the role of syntactic complexity in terms of level of embedding or phrasal constituents, which could perhaps play an additional role. Operationalising any measure of complexity would prove difficult, especially given that the corpora are not parsed and so there are no readily available measures such as maximal nodes, which could be counted. Given that Wasow has found that weight as a raw count of number of words in a noun phrase is a reliable indicator of when an NP might be shifted, it is assumed that using this measure will provide a workable set of results. Recent corpus studies (Lozano & Mendikoetxa 2009, Osborne 2008) have also adopted number of words as their measure of weight in studies of word order variation in learner English and so taking the same option has the advantage of enhancing the comparability of the results.

Information status

Inverted subjects were coded as given, new or inferable. 'New' and 'given' were operationalised in the sense of Prince (1992) as discourse-new or discourse-old. Thus, 'given' was used if the referent of the subject had been previously mentioned in the text, 'new' if it had not been previously evoked in the discourse. The third information structural category, 'inferable' followed Prince's (1992: 312) guidelines as those which evoke "entities which were not previously mentioned and which I as the reader had no prior knowledge of, but whose existence I could infer on the basis of some entity that was previously evoked and some belief I have about such entities." As the essays in the corpus were mostly relatively short with an average length of 687 words for the essays in ICLE, it was a comparatively simple procedure to identify where the sentence of interest occurs in the essay and read the preceding passage to determine if the referent had been evoked in the stretch of discourse previous to the occurrence of the token.

It is acknowledged that a methodological issue is that "coding for information-status is never an easy matter" Prince (1992: 311). Information status was primarily used to identify the extent to which the pragmatic properties of stylistic inversion has been acquired by the learners. Values for information status were only coded when the

subject was inverted with a main finite verb or a form of copula *be*, but not where only a modal or aspectual auxiliary was inverted with the subject.

VAO

In the VAO sequences (Ex. 6.9), the weight of the object was coded in number of words. Furthermore, the finiteness of the verb was coded as either finite or non-finite. Recall that if the cause of the surface VAO string is an underlying verb movement operation, this should only be in evidence with finite verbs as non-finite verbs in German do not undergo movement. Non-finite verb forms include infinitives and participles. Recall also that there is no motivation for participles in periphrastic tenses to raise above adverbs (or negation). In addition, the semantic type of adverb was coded to allow a consideration of where the adverb would most felicitously surface in the clause.

(6.9) I am sure that I have always someone to go to. (ICLE-GE)

Negation

The patterning of sentential negation was quantified by searching for the tag sequences outlined in Table 6.9. This permitted a straightforward comparison of the occurrence of thematic verb raising over negation with target negation patterns. The most directly relevant comparison here involves the occurrence of *do*-support in comparison to thematic verb movement past negation as this will allow an evaluation of the extent to which the learners know that English thematic verbs do not raise out of VP.

<i>Tag Sequence</i>	<i>Pattern of Sentential Negation</i>
VD* XX	do + not
VH* XX (V*)	have + not + (VLEX)
VB* XX	be + not
VM XX	Modal Auxiliary + not

Table 6.9: Search terms for sentential negation

6.3 Excursus: Defining the Advanced Learner

Any attempt to define the proficiency of an L2 learner is problematic. Standardised testing provides a rigorous account of the level of attainment in a second language but is connected not just to L2 proficiency but also to literacy and the specific skills involved in taking (usually written) tests. Similarly, institutional status, while widespread as a measure in the literature involves judging proficiency according to the length of exposure to the L2 or the length of instruction in the L2. This is somewhat problematic as quantity need not be a measure of quality and it is impossible to reconstruct exactly what “exposure” means for each individual L2 learner.

Institutional status can be defined after Thomas (1994: 317) as the learners’ positions “in some hierarchically-organized social structure, for example, as students in first-year versus third-year classes.” In Thomas’s meta-study of 157 research articles published between 1988 and 1992 in *Applied Linguistics*, *Language Learning*, *Second Language Research* and *Studies in Second Language Research*, institutional status was the most widely used measure of proficiency in the L2. 41.9% of the research used institutional status compared to 20% for impressionistic judgment, 14.9% for in-house assessment, and 21.3% for standardised testing.

It should of course be acknowledged that the extent of usage of a particular technique does not necessarily equate to being objectively the best technique. Standardised testing would perhaps be the most satisfying measure of proficiency. Taking institutional status as a measure of proficiency is of course problematic to some extent. However, for present purposes, given that ICLE assumes this measure, it was necessary to adopt this same measure for the WU participants in order to enhance comparability. In addition, it has the advantage of affording the possibility of gathering a relatively large and homogenous sample of participants, which would be more problematic if some other measure was used. It must be acknowledged that adopting external criteria such as institutional status will likely mean that there is a certain bandwidth of ability within each group. Granger et al (2002: 14) in fact acknowledge that proficiency level ranges from higher intermediate to advanced in ICLE.

More recent SLA studies continue to adopt different measures of proficiency of learners. Especially for “very” advanced” or “near-native” speakers the methods tend to be based more on subjective or external criteria rather than some standardised measure of proficiency. White (2003a: 129), for example, refers to studies of the end-state grammar in SLA as studies of “bilingual speakers who are fluent in the L2, who use it frequently, and who have had ample exposure to L2 input over an extended period of time.” While these seem to be somewhat fuzzy concepts which are difficult to pin down, they can be operationalised as the length of exposure to the L2 in a country where it is the ambient language, as length of instruction in the L2, etc. These criteria are then easier to reproduce in other studies compared to adopting specific tests, which might not be generally available and where the benchmarks set to define ‘advanced’ as opposed to ‘intermediate’ or other finer distinctions could differ from study to study.

Sorace (2005, 2006a) likewise points out that the sort of optional structures she investigates are typical of “near-native” or “very fluent” English L1 speakers of Italian, without defining in terms of testing what exactly this means. The concept of near native is made more concrete as “adult learners who have reached the near-native level, and continue to benefit from full exposure to the L2, can be assumed to have progressed to the furthest attainable competence level: if there are differences between their grammar and the target grammar, these differences may therefore be considered permanent.” (Sorace 2005: 58)

So while acknowledging that defining a set of learners as advanced on the basis of their institutional status brings with it certain problems, it is in fact a widely accepted practise in the field of SLA studies. All methods of defining proficiency in an L2 are fraught with their share of conceptual and methodological problems. In the absence of a standardised test which can be adopted by all practitioners in the field of SLA research, it is argued that institutional status is an appropriate method for defining the level of proficiency in an L2.

7 Methodology: Grammaticality Judgement Task

In this chapter, the methodology used in the judgement part of the study is presented. Information about the participants who completed the study is outlined in Section 7.1. The sort of constructions used in the judgement task is discussed in 7.2. This relies on the discussion of V2 and word order variation in English and German from Chapter 1. The specifics of the tasks are described in Section 7.3. The final section discusses the procedures used for data analysis.

As the corpus study permitted quite an extensive study of SI, this is not dealt with in such detail in the GJT with only one test sentence. Moreover, it would be difficult to test with the sort of straightforward judgement task administered as the lack of context would perhaps make functionally motivated inversion seem at least pragmatically infelicitous and possibly induce an unacceptable rating in reaction to this rather than the grammaticality of the structure and whether or not the learners had knowledge of this.

7.1 Participants

The control group of native speakers of English was identified through a network procedure and consisted of undergraduate and postgraduate students in language and linguistics departments at the Queen's University Belfast, the University of Cardiff and University College Dublin. Lecturers in these departments forwarded the web link to the judgement task website and relevant information to the students and participation was voluntary.

Data collection was stopped and the web link to the judgement task deactivated when the number of participants reached 60. Of these, 10 participants did not complete the judgement part of the task and one provided just two judgements. These participants were therefore excluded from the dataset. In addition to the experimental sentences to which the participants provided judgements, the online task included a number of background questions asking for biographical details such as age, educational level,

knowledge of foreign languages, and whether or not the participants were bilingual. All except four of the native speaker participants had knowledge of at least one foreign language. The majority of native speakers were following degree programmes in English Language (n=22). 13 studied Linguistics as a single major or in combination with a language, 5 studied Commerce (in combination with a language), and 3 were students of Communication. The remainder of the native speaker participants provided only the type of degree programme they were following (e.g. BA, PhD, etc.) without the further details about their degree subjects. The biographical characteristics of the 49 participants who provided judgements are outlined in Table 7.1.

<i>Age</i>	<i>Sex m/f</i>	<i>Education</i>
22.2 (18 – 56)	11/38	5.2 semesters (0 – 12)

Table 7.1: Background Characteristics of Native Participants

The learners who participated in the acceptability judgement study were drawn from the same peer group as the learners who contributed to WUCLE. The data collection procedure was slightly different compared to the native group in that a pre-selection was carried out for the learners. Teachers of seminars at the English Department asked for volunteers from among students whose native language was German. These students provided their names and email addresses and were subsequently contacted by email and received further instructions and the link to the judgement task. As with the native speakers, data collection was stopped and the link to the task deactivated when the total number of participants reached 60. The instructions for how to complete the task and the questions in the biographical section of the task were in German. 17 of the learners did not provide any response to the question which asked for their native language. However, as the pre-selection procedure involved asking for volunteers solely from among monolingual native speakers of German, it can be safely assumed that the whole group were L1 German speakers. All 43 learners who did respond to this question were monolingual native speakers of German.

As with WUCLE, the learners were all students of International Business Administration and they were aged between 21 and 41. They had had between 3 and 7 years of university education. In terms of their experience of instruction and exposure to English, they had spent between 10 and 20 years learning English and up to 2.6 years in an English-speaking environment. Nine learners reported spending no time in an English-speaking country. The background information provided by the learners was for obvious reasons more extensive than that provided by the native group and is outlined in Table 7.2. Of the 60 participants in the study, one student did not provide any judgements to the test sentences and one provided only eleven judgements without making use of the “don’t know” option for the remainder of the sentences. Both participants were excluded from the study.

<i>Age</i>	<i>Sex m/f</i>	<i>Education</i>	<i>Taught English</i>	<i>Age of Commencing English</i>
23.8	25/33	9.5 semesters university	13.8 years	9.8 years

Table 7.2: Learners’ Background Characteristics

A further piece of relevant background information collected for the judgement group was the amount of contact they had with English outside of the compulsory English courses. Various other courses at the university are taught in English and students reported having to use English in jobs, internships etc. The question asked for an approximate value in terms of number of hours of contact with English outside of English class. 15 students reported having no contact with English outside of formal instruction, while the average was 4.9 hours of contact per week (between 1 and 40 hours). The other relevant learner variables were identical to those for the learner contributors to WUCLE, i.e. they had followed to same compulsory courses amounting to 14 ECTS credits, which should correspond to a workload of 350 hours of English over the course of their university careers.

7.2 Judgement Sentences

The judgement task was obviously intended to test firstly whether or not the learners retained a more generalised V2 constraint transferred into their L2 English, and determine what linguistic factors might constrain this, and secondly the extent to which the learners had knowledge of the different V2 constraints in English. Drawing on the research questions outlined in Chapter 5, a second purpose of the judgement sentences was to test the extent to which the transfer of V2 was restricted to interface conditions. There was therefore a distinction between two main types of structures.

- i) sentences with a fronted XP with and without and subject-verb inversion
- ii) sentences with verb movement over adverbs and sentential negation, and other felicitous and infelicitous adverb placement not implicating V2.

This was the main way of operationalising the interface/non-interface distinction. It is to be assumed that V2 implicating the fronting of constituents and inversion is connected to the interface between syntax and discourse. A further distinction between the movement of thematic verbs compared to auxiliary verbs illustrates whether the learners have knowledge of the narrow syntax of English, i.e. that thematic verbs cannot raise out of VP. Evidence of thematic verb movement in questions also indicates that there is transfer of a narrow syntactic verb-raising operation. Sentences involving the movement of thematic verbs over adverbs and negation would likewise indicate the transfer of a narrow syntactic movement operation. The range of other ungrammatical adverb placement structures was intended to test the possibility that the learners had general problems with adverb placement which does reflect the transfer of V2. Overall, 29 of the total of 70 sentences were ungrammatical.

The type of each structure is given in (7.1-7.16). The analysis will also provide a more course-grained view by combining individual structures, for example comparing overall V2 with V3. The test sentences build syntactic minimal pairs, for example in terms of the type of fronted constituents and verbs in grammatical versus ungrammatical contexts. Each learner and native speaker provided judgements on 70 sentences, 16 of which were filler sentences, the results of which are not reported here. The full list of 54 test sentences is provided in Appendix 1. The test sentences can be divided broadly into

those which test V2 in fronting/inversion contexts (7.1–7.10, n=25) and those which tested V2 in contexts with a verb raised over sentence medial negation or adverbs (7.12–7.16, n=29). In addition to grammatical and ungrammatical sentences with verb raising and V2, sentences also tested to a certain degree the learners' knowledge of word order variation in English which may implicate V2, i.e. interrogatives, negative inversion and stylistic inversion.

- 7.1 **V2TopAdvAux: inversion of auxiliary following a fronted adverbial.** Generally do I expect economic conditions to improve.
- 7.2 **V2TopAdvLex: inversion of lexical verb following fronted adverbial.** Last year rose the number of unemployed in Europe.
- 7.3 **V2TopArgAux: inversion of auxiliary following a fronted adverbial.** The managing director congratulated his team, and especially the marketing manager did he praise.
- 7.4 **V2TopArgLex: inversion of lexical verb following fronted argument.** An example of innovation offers the service sector.
- 7.5 **V3: target English word order following fronted element.** In 1995 Austria became a member of the EU.
- 7.6 **SI: stylistic inversion.** Out of the meetings emerged a new agreement on salaries.
- 7.7 **QTC: interrogative with auxiliary T-to-C movement.** Where did the meeting take place?
- 7.8 **QLex: interrogative with lexical verb movement.** When begins the meeting with the clients?
- 7.9 **NITC: negative inversion with auxiliary T-to-C movement.** Only at the last minute did we succeed in the negotiations.
- 7.10 **NILex: lexical movement after fronted negative operator.** Under no circumstances accept we the terms of this contract.
- 7.11 **NISitu: non-movement of lexical verb after fronted negative operator.** Never I expected such a positive result.
- 7.12 **NegAux: sentential negation with auxiliary verbs or do-support.** I haven't prepared my presentation
- 7.13 **NegLex: thematic verb raised over sentential negation.** We accepted not the conclusions of the survey.

- 7.14 **AdvV3: target sentence medial adverb placement.** Our plan would initially cost a lot.
- 7.15 **AdvV2: thematic verb raised over sentence medial adverb.** I read often the Wall Street Journal.
- 7.16 **AdvOther: ungrammatical adverb placement no implicating V2.** Our company awards contracts always to the lowest bidder.

The vocabulary used in the test sentences was either high frequency lexical items or vocabulary drawn from the English courses taught at the WU. All vocabulary taken from the WU courses was terminology which was given explicit attention as part of the courses. It could therefore be expected that this was all known to the majority of the learners and should not provoke a reaction to lexical factors.

The sentences had an average length of 8.9 words. Given the type of structures under investigation, it was for obvious reasons necessary for the sentences to have a certain degree of syntactic complexity, which in turn gives rise to a higher word count per sentence. It is of course impossible definitively to rule out the possibility that learners might react to complexity or certain other lexical or semantic elements in the sentences. The fact that the learners had been exposed to all the vocabulary previously minimises this risk. In addition, while the participants were advised not to spend too much time on the task (see below) in order to tap their first reactions, the task was untimed and so all the participants, and in particular the learners, were able to read and react to the sentences in a manner convenient for them and were not forced to read at a pace which might have caused misunderstanding.

7.3 Judgement Task

The task was completed online through Survey Monkey (<http://www.surveymonkey.com>). A link to the online survey was sent to all participants by email. The participants then completed questions which asked for background biographical information as well as providing judgements on the test sentences. The email containing the link briefly described the purpose of the research and the time needed to complete the survey. The first page of the survey contained more detailed information on the nature of the task. This explained that the participants should provide

judgements on a five point scale and that they should judge them according to their initial reaction to whether or not the sentence was grammatically possible in English. For the learners, the information stated that there were no “correct” answers and that they should not reflect on grammatical information they had received in English class. All participants were advised that they should not spend a long time considering their answers but should provide their initial judgement and should not then revise this. The information and instructions in the survey were in German for the learners. The full texts of the instructions are in Appendix 2.

After reading the instructions, clicking ‘Next’ took the participants to a page with background biographical questions. The final page of the survey then presented the list of test sentences ordered vertically. The judgement scale was ‘Very Good, Good, Don’t Know, Bad, Very Bad’ (or the German equivalents for the learners). For each sentence, the task was to click a box under one of these judgement descriptors. It was only possible to activate one judgement per sentence. The order of the test sentences was randomised for each participant so that no two participants saw the sentences in the same order. On completing the judgements, the participants clicked “Done” at the bottom of the webpage to complete the survey and save the judgements. The biographical data and the responses to the test sentences are saved online and subsequently retrieved and downloaded in spreadsheet format.

7.4 Data Analysis

The Survey Monkey software saves the data which can be retrieved by the researcher. The data was exported into SPSS to facilitate data analysis. The judgements for each sentence were transformed into mean judgements for different the different variables listed above. t-tests and ANOVAS were computed for group analyses on the basis of the mean judgements of the different variables to compare the judgements of the native speakers with the learners. Furthermore, the relative acceptance of different structures by the learners serves to indicate the extent to which there is a distinction between the different constructions or whether V2 transfers in all expected contexts and whether the V2 properties of English are all equally (un)acceptable for the learners.

In addition to these main distinctions above between ungrammatical V2, target V2 and verb movement, more refined analyses were conducted by computing various variables for V2 diagnostics, for example the effect of verb type, fronted constituent, etc. to examine the extent to which these different properties affected transfer. This affected in the main inversion structures and the more refined variables are listed in (7.17) with a representative example test sentence for each.

(7.17) UV2Aux: ungrammatical V2 with movement of an auxiliary verb.
Because of problems with delivery have we cancelled the contract.

GV3Aux: grammatical V3 with fronted XP and an auxiliary verb.
Recently the stock market has performed badly.

UV2Lex: ungrammatical V2 with movement of a thematic verb.
Last year rose the number of unemployed in Europe.

GV3Lex: grammatical V3 with fronted XP and a thematic verb.
In 1995 Austria became a member of the EU.

UV2Adv: ungrammatical V2 after a fronted adverbial.
At the moment is the company expanding quickly.

GV3Adv: grammatical V3 after a fronted adverbial
Owing to more efficient production, the manufacturer increased its profits.

UV2Arg: ungrammatical V2 after a fronted argument.
The managing director congratulated his team, and especially the marketing manager did he praise.

GV3Arg: grammatical V3 after a fronted argument.
I am sure about the price, 1000€ we offered.

UV2Cop: ungrammatical V2 with copula *be*.
Start-up capital is hard to find but important is it nonetheless.

UV2Equate: ungrammatical V2 with an equative verb
An example of innovation offers the service sector.

The final category here is made up of a subset of the examples with lexical verbs, i.e. those lexical verbs with copula-like argument structure. This is operationalised as lexical verbs which lack an active agent/affected patient structure. These were designed to test the lexically-linked V2 proposition put forward by Roeper (1999).

8 Results: Corpus Study

This chapter presents the results of the corpus study. Section 8.1 covers some necessary preliminaries. The remainder of the chapter is split between a consideration of the status of the English V2 properties in the learner corpora, and finally the occurrence of ungrammatical V2 or verb movement, which might be due to L1 transfer from German. The results for V2 diagnostics in LOCNESS set the scene for this. In particular, the occurrence of stylistic inversion provides a background against which to judge inversion structures in the learner corpora and establish whether inversion structures are approximations of target structures or non-target structures.

8.1 Preliminaries

Table 8.1 summarises the number of occurrences of the main inversion diagnostics in declaratives in the various corpora. The values given follow standard procedure in corpus linguistics by providing the occurrence of the V2 diagnostics as a function of number of tokens in each corpus. This is more problematic for syntactic structures than for studies of the distribution of specific lexical items as inversion, etc. involves syntactic constituents such as whole NPs which may be made up of varying numbers of words. A preferable measure might therefore be to provide the number of occurrences of a given syntactic structure as a function of the number of contexts in which it is either a requirement or an option. Computing these values is a fairly straightforward procedure for interrogatives, negation and negative inversion and these are presented in the relevant sections below. However, given that the corpora are not parsed it is not possible reliably to identify all VAO and inversion contexts. Approximations are possible for each of these structures and are likewise provided in the relevant sections.

<i>Corpus</i>	<i>Declarative Subject- Main Verb Inversion</i> ³⁰	<i>Negative Inversion</i>	<i>Be-Inversion</i>
ICLE-BU	1.42	1.83	1.78
ICLE-DU	0.41	1.46	1.24
ICLE-FI	0.38	1.81	1.31
ICLE-FR	0.43	0.98	0.65
ICLE-GE	0.72	2.12	1.35
WUCLE	0.11	0.85	0.33
LOCNESS	0.50	2.34	1.26

Table 8.1: Occurrence of inversion in declaratives (per 10000 tokens)

What is of primary interest in the identification of V2 is whether and how the production of the V2-L1 learners diverges qualitatively from that of the other learner groups and therefore where transfer of V2 might be a factor. The relatively low absolute frequencies of V2 diagnostics should not, therefore, present any problems, and in fact is to be expected given that inversion is often a stylistic variant. However, a pattern that consistently emerges from the data is that the Bulgarian group produce on the whole more inversion overall in declaratives, while there are only few occurrences of inversion of any kind in ICLE-FR and WUCLE. In the case of WUCLE, the comparably low rate of occurrence can be explained straightforwardly by the fact that fewer learners contributed to this corpus than the others. It should be borne in mind that inversion of any kind in declarative clauses in English is rare, as evidenced by the figures for the native students' texts. Many instances of inversion, are, as the name 'stylistic inversion' suggests, stylistic or pragmatic options that could also be expressed with an uninverted word order (recall also that for present purposes instances of there-insertion are also assumed to be uninverted and are therefore not included in the counts). As such, it is therefore dependent on individuals' decisions to encode a pragmatic option with a particular syntactic configuration, which could also be expressed by other means not

³⁰ This does not include instances of quotative inversion. Be-inversion is treated here and in the ensuing discussion separately from main-verb inversion as it presents some interesting issues which may or may not be judged to show evidence of transfer.

involving inversion. Given that this is the case, the fact that WUCLE samples a smaller population than the other learner corpora makes it less likely that that population will include learners who have both active knowledge of inversion and employ it productively. The reasons for the differing rates in ICLE-BU and ICLE-FR are not so easily captured by methodological considerations; the fact that Bulgarian has a relatively free word order might indicate that this is an effect of transfer of word order variation from the L1. Nevertheless, as mentioned, quantitative issues of over/underuse are in any case not the focus of interest here.

A final note is in order on the wider linguistic contexts of all the learner corpora. It is assumed without further discussion that target-like English representations underlie clauses with surface V2 such as SVO but in which there is no overt diagnostic for movement. This is to some extent, of course, an empirical question, and the results given below are intended also to demonstrate that a non-verb movement grammar is the most likely representation based on the diagnostics normally assumed for verb raising. A perennial problem for acquisition studies is, however, that it is in principle possible that a given surface order produced by learners may be derived by any number of mental representations. The empirical facts from the corpora will, however, suggest that the assumption of a V-in situ grammar is on the whole justified.

8.2 LOCNESS

The results from LOCNESS are used in the main to establish a baseline for the occurrence of stylistic inversion, which are then compared to the results for the learner corpora and thus establish the extent to which the learners' production is constrained by the same interface factors as the native speakers'. The LOCNESS results for the inversion of copula *be* and adverb placement are presented alongside the learner data in Sections 8.4.2 and 8.5.2 below to facilitate a more direct comparison.

Results for sentential negation are not discussed in any detail. Unsurprisingly, there is no variability in the occurrence of negation structures in LOCNESS. For the sake of completeness, the numbers for negation structures are given in Table 8.2. The same holds true for SAI in interrogatives and negative inversion, see below.

<i>Negation Structure</i>	Do + Neg	Be + Neg	Modal + Neg + Participle	Have + Neg + Participle
<i>No. Occurrences</i>	790	773	734	89 ³¹

Table 8.2: Sentential Negation in LOCNESS

Subject Auxiliary Inversion

As expected, where inversion of an auxiliary after a fronted negative or interrogative operator is a syntactic requirement, there is also no variability in the native English corpora. SAI is in evidence in 100% of the expected contexts. 76 sentences have fronted negators/negative PPs (n = 66) or restrictive adverbials/PPs (n = 10), all with SAI. Of 410 main clause interrogatives in LOCNESS, 19 are subject *wh*-questions and the remaining 391 all have SAI (or inversion of copula *be*).

8.2.1 Stylistic Inversion

There are 57 occurrences of XVS structures in LOCNESS and it occurs in 10% of texts in the corpus (n = 44). The results for main verb-inversion in LOCNESS show definite trends, which on the whole reflect the variables that are normally posited as constraints on stylistic inversion in English. Recall here that the following discussion relates only to the inversion of main thematic verb, not *be*-inversion in declaratives.

Verb Type

41 of the instances of main clause XVS involve inversion around copula *be*. The 16 instances of inversion around other main verbs all involve intransitives. While ‘unaccusative’ was not used as a coding variable for the type of verb, all of the verbs in XVS structures are on the whole canonical unaccusatives. It is striking that 75% of the

³¹ There is one further instance of thematic *have*-raising (i). Perhaps surprisingly, there are no other instances of thematic *have*-raising and this single occurrence is clearly idiomatic in nature. This might reflect the ongoing loss of raising in modern English.

(i) He loses his bet with Martin that the couple sitting across from them **haven’t a care in the world**. (ICLE-BR-SUR-0016.2)

tokens of stylistic inversion with lexical verbs involve the lexical item *come*. The remaining instances of SI are listed in Ex. (8.1).

- (8.1) a. Thus **began** the campaign to educate the public on how one contracts AIDS.
b. Throughout the play **runs** the theme of 'fraternité'.
c. On the third **is running** the AI program.
d. So there **stood** Mark Woodley, a martyr to the AIDS community, ousted by corporate America.

With the exception of (8.1a), these all conform to the proposed variables which give rise to felicitous inversion, with a fronted locative PP or adverbial and inversion of the subject with an unaccusative verb. (8.1a) is also acceptable in context as inversion after *thus* is acceptable in formal written style, even though a discourse adverbial such as this is not usually given in the theoretical literature as an element which might give rise to inversion. This could be viewed as a truly lexically-specific construction even in native English.

It is striking that the majority of the instances of inversion around *come* appear to be rather formulaic in nature. 75% of these examples are of the form '*with X comes Y*' as in (8.2).

- (8.2) **With this competitiveness comes** the desire to stand out from the crowd.
With a good football team comes free publicity and it is always good.
Along with respected sources come well thought out studies that have been completed.

So, the lexical verbs in SI structures conform to the constraints proposed in the literature on the type of verb that may felicitously take part in inversion. However, it appears that the structure as produced by the LOCNESS participants has a distinct formulaic flavour, with the lexical item *come* apparently the prototypical verb in this sort of structure. It should be noted that each occurrence of the '*with X comes Y*' structure occurs in a different text and so seems to be widespread in the speech communities sampled.

The Status of Inverted Subjects

87.7% of the inverted subjects in XVS structures refer to new information, which is in line with the assumption that this is a device for introducing new information into the discourse. The two instances of inversion where the referent of the subject had been previously evoked in the discourse are given in (8.3). As is obvious, even though the referent of the subject NP is discourse-old, it is long and syntactically complex and, as such, inversion can be seen as an aid to comprehension and parsing, (compare the uninverted counterparts in (8.4) below).

- (8.3) a. Eden was where he felt in control of himself in his early life but **then came the revelations and the trying to come to terms with them which is the Fall** and then there is the final stage of judgement which could also be compared to Hell.
- b. So there stood **Mark Woodley, a martyr to the AIDS community, ousted by corporate America, in its ongoing quest to promote image above real people.**
- (8.4) a. ??Eden was where he felt in control of himself in his early life but **then the revelations and the trying to come to terms with them which is the Fall came...**
- b. ??So there **Mark Woodley, a martyr to the AIDS community, ousted by corporate America, in its ongoing quest to promote image above real people** stood

Phonological Weight

In terms of the role of phonological weight, the average weight of the inverted subject in the XVS contexts is 5.3 words. I present this without further discussion at this stage; as pointed out in relation to the Wasow (2002) studies of the role of weight in word order variation, it is not clear that weight even plays a significant independent role in the production of inversion. It becomes clear from the inversion produced by the native speakers in LOCNESS that the XVS structures conform to all the functional requirements for inversion in so far as the referent of the subject is generally new information in the discourse, and the verb is either an unaccusative or copula *be*. A number of tokens fulfil only some of these criteria but are obviously still acceptable in context and this is particularly the case with the phonological weight of the postposed

subject. There are instances where the subject is realised as a light NP as in (8.5), where the subjects are a one-word and two-word NP respectively.

- (8.5) a. After De Gaulle came George Pompidou in 1969.
b. Along with the traffic congestion, comes pollution.

However, these sentences fulfil all the other criteria for felicitous inversion in that already evoked information is fronted in the initial PP, the subject NP introduces a discourse-new referent and the verb is unaccusative. So, as observed in previous work, it seems there is an intricate interplay of various factors and that not all criteria need to be fulfilled to produce felicitous inversion. Further evidence is provided by the examples from LOCNESS where the referent of the inverted subject NP represents given information, see (8.4) above. While the inverted subject NPs in these instances do not refer to new information in the discourse, it is long and syntactically complex and so the inversion is felicitous and aids parsing. Compare again, for example, the ungrammaticality (or at least degraded acceptability) of the non-inverted equivalents.

To summarise then, the findings from the native English control corpus lend further support to the array of research discussed in Ch. 1, which posits a number of functional interface conditions on the felicity of inversion structures in English. To identify and delimit instances of target-like inversion from non-target structures in the learner corpora, the realisation of each of these functional factors is compared in the learner and native corpora in what follows.

8.3 English V2 Properties in the Learner Corpora

Here we consider the extent to which the different L1 groups' production reflects their acquisition of the various V2 properties of English.

8.3.1 Stylistic Inversion

It will be shown that the apparent constraints on the production of SI by the learners differ in some ways from the constraints on felicitous SI in native English, but that they are nonetheless best considered as production of word order variation licensed in English rather than divergent word order variation or due to the influence of the L1. To

the extent that SI can be seen as an instantiation of a minor V2 parameter setting, the learners seem on the whole to have acquired the fact that this is licensed in English. Where there is divergence from target norms with SI, this can be assumed to be due to non-mastery of the interface conditions on a marked word order pattern. The relevant point is that the V2-L1 learners seem to pattern with the other L1 groups in their production of SI and thus have successfully separated this instantiation of V2 in English from a general syntactic V2 constraint.

It should be noted again that while the results are presented independently for the three main factors which regulate SI in English, the acceptability of inversion structures is the result of the interplay between these different constraints and looking at each in isolation does not say a lot about the acceptability of the structure as deployed in context. It would be better to think of the acceptability of inversion on a scale where the different factors interact to determine whether or not the inversion ‘works’ in context. Overall, the majority of instances of SI in the learner corpora are acceptable in context and conform to the constraints normally assumed to be operative in native English. Table 8.3 presents the distribution of SI in the learner corpora.

	ICLE- BU	ICLE- DU	ICLE- FI	ICLE- FR	ICLE- GE	WUCLE
SI per Text (%)	8.8	3.2	2.9	2.6	3.2	3.2
Distribution (10,000/w)	1.42	0.41	0.38	0.43	0.72	0.11

Table 8.3: Stylistic Inversion in Corpora

While the absolute numbers are low for WUCLE, as a percentage of the number of texts in the corpus, it is within range of the others. In comparison to the other groups, the Bulgarian learners show an unusually high instance of SI, which finds an explanation below.

Effects of Verb Type

The results for the type of verb in XVS structures in the learner corpora are presented in Figure 8.1 along with the results from LOCNESS. Again, it is assumed for the ensuing discussion that stylistic inversion refers only to word order patterns of the form X-VLEX-S, where the verb is intransitive. WUCLE contained only two instances of XVS which conform to this definition and is therefore excluded from the discussion. The other occurrences of inversion, particularly around auxiliaries and copula *be*, are assumed in some cases to be the result of transfer of V2 (see Section 8.4 below).

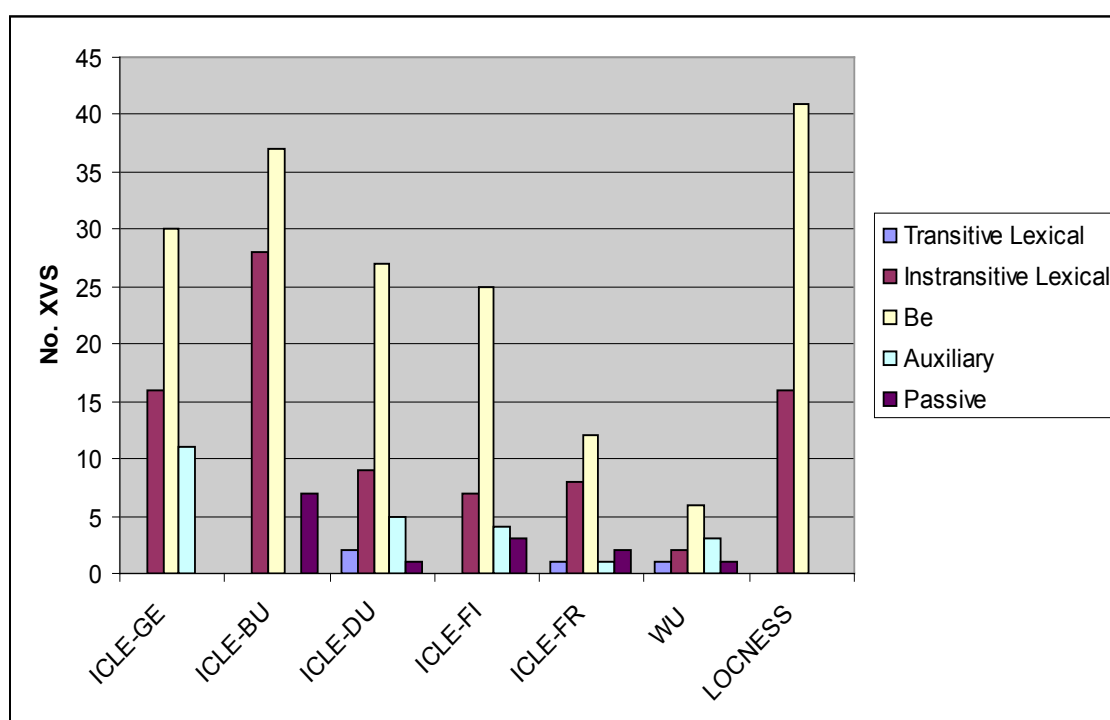


Fig. 8.1: Types of Verb in XVS Structures

As is obvious, the profiles for the types of verbs which appear in XVS structures in the learner corpora differ markedly from those in the native English corpora. While only unaccusative intransitives and copula *be* permit inversion of their subjects in native English, the learners allow inversion with a wider range of types of verbs. However, there are distinctions in the structure of inversion around the different types of verbs, which indicates that SI is a qualitatively different phenomenon in the learner corpora as compared to other XVS instances.

As with the natives, the learners on the whole conform to target English norms in so far as the verbs are overwhelmingly of the types generally considered canonical

unaccusatives (Table 8.4). Thus, the production of inversion structures by all the learner groups conforms to the syntactic constraints on SI in English, showing that they have acquired the fact that English syntax only licenses inversion with unaccusative verbs. However, the interface constraints on SI are more variable, and do not always conform to target English norms.

<i>ICLE-GE</i>	<i>ICLE-BU</i>	<i>ICLE-DU</i>	<i>ICLE-FI</i>	<i>ICLE-FR</i>	<i>ICLE-GE</i>
6 x come	1 x arise	1 x begin	1 x come	1 x come	1 x appear
1 x follow	17 x come	4 x come	1 x exist	1 x come	1 x come
4 x lie	1 x emerge	1 x flow	1 x go out	1 x follow	1 x follow
2 x live	1 x end	1 x lie	3 x lie	1 x happen	1 x happen
1 x run	1 x ensue	1 x live	1 x stand	1 x hide	1 x hide
1 x show	1 x follow	1 x start	1 x come	1 x lie	1 x lie
1 x stand	1 x lie				
	1 x live				

Table 8.4: Verb Tokens in XVS in Learner Corpora

The examples of SI, even if they contain verbs which in principle permit inversion, may still be infelicitous in context, when the discourse constraints on the occurrence of SI are not in place. The relevant point, for the V2-L1 learners in particular, is that this could indicate that the learners have been able to differentiate between different factors which regulate inversion in English and so it seems do not permit V2 with transitive thematic verbs. The syntactic constraints on inversion are therefore apparently in place. The source of this knowledge is more difficult to pin down. As will be argued below, formulaic knowledge appears to be in evidence, and might suggest that this is the result of specific structures perhaps being taught in the language classroom. However, this cannot be the only factor. Firstly, the details of inversion structures tend not to be given a great deal of attention in EFL classes, and obviously an abstract theoretical consideration of the various linguistic factors involved in its production would be unrealistic in language instruction. Secondly, where pedagogical material does indeed refer to stylistic and locative inversion structures, it is confined on the whole to a presentation of a limited range of fronted constituents which might give rise to inversion. For example, the Collins Cobuild English Grammar (Sinclair 1999: 285, 297) states that an intransitive verb may precede its subject after an adjunct of place. Swan (2005: 281) gives the same information and mentions in addition that inversion may happen particularly when the subject is indefinite. Greenbaum (1996: 76) deals with inversion around *be* and states that this is the case when a locative or directional complement is fronted. To the extent that inversion in declaratives is explicitly taught at all, it is then likely that this teaching involves pointing out that certain fronted constituents may trigger inversion with intransitive verbs.

This lends support to the claim that the knowledge displayed by the learners overall is unlikely to be derived from the language classroom. However, by following pedagogical ‘rules’ of this sort, the learners could produce SI which conforms in the vast majority of cases to the constraints on inversion in native English and it seems in some cases that these rules might be in evidence in the production of certain formulaic pattern or ‘chunks’ which recur in the corpora. The repetition of certain formulaic structures by different groups might indicate that the learners acquire some of these sorts of structures as phraseological units (8.5).

- (8.5) a. **Now comes the didactic bit.**
 b. **And now comes the big surprise**, namely that the woman seemed to be utterly amused by what had happened.
 c. Psychologically speaking, and **here comes in the high-brow bit**, there is no better way of letting off steam than by driving.
 d. The nervous family father, who has worked hard all the week wants to make a relaxing shopping tour now and so he's getting furious seeing this invasion of cars - what remains than staying on the sirene to show the others: **here come I.**

It is possible that formulaic structures of the form “here comes X” or “now comes X” are being employed here. The fourth example, in particular, with infelicitous inversion of an informationally and phonologically light pronominal subject, does not seem to represent knowledge of the discourse constraints on felicitous SI but rather the application of a phraseological rule along the lines of “here comes plus subject”.

This phenomenon appears to be particularly evident in ICLE-BU, where precisely the phrase “here comes X” is used seemingly as a discourse organising phraseological unit in contexts which are somewhat awkward given the constraints on SI in native English (8.6). This could be the result of transfer as presentative clauses of this sort would also have inversion of the subject in Bulgarian, as outlined for presentative clauses in Bulgarian in Section 1.4.

- (8.6) So, logically **here comes the question** why some people have more money than others and there are such that have no money at all.
 So, **here comes the problem.**
 However, **here comes the question** to what an extent can all these university degrees prepare students for their future life and aren't they more theoretical than practical?
 On the other hand, **here comes the unwillingness of man to be 'dehumanized'**, equated to a machine, deprived of soul and feelings.
Here comes the need of inequality.
 And **here comes the question**: what dos the university give you and what does it take?
 And **here comes the other side** – alienation.
 Soon nobody will fear death for here **comes cloning** - the password to eternity.
 There will always be some discrepancy, some deficiency, because contribution can not be measured in money and **here comes the moral reward** as compensation.

Incidentally, this provides an explanation for the fact that ICLE-BU seems to have an unusually high overall number of XVS structures with intransitive lexical verbs in

comparison to the rest of the learner corpora. The examples of “here comes X” apparently being employed as a phraseological unit account for over half (52.9%, n=9 of 17) of all the X-VLEX-S tokens in ICLE-BU.

It seems most likely then an interplay of different influences is at work in the production of SI by the various learner groups. The teaching and conscious application of learned rules has an influence on the types of structures the learners produce, which at times seem to be retrieved as phraseological units, or construction frames with empty lexical slots for different NPs, for example “here comes X.” This, however, cannot be the whole story. The fact that the range of structures with different verbs all conform to the intransitive/unaccusative constraint on SI in English suggests that the learners are able to go beyond purely formulaic knowledge and generalise to a whole semantic class of verbs (see Ch. 10 for discussion of learning mechanism which may underlie this). For the time being, it suffices to say that those learners who produce SI have been able to establish the syntactic constraints on this V2 property of English, although some difficulties might remain in terms of getting its discourse distribution right. This is particularly relevant for the L1 German and Dutch speakers as it indicates that in these cases there is no transfer of the general V2 constraint from their L1, rather they have established that the SI surface V2 pattern in English is qualitatively different and limited to a specific range of verb types.

Passives

There were 13 instances of inversion around passives in the learner corpora, 7 of which occurred in ICLE-BU, indicating perhaps an effect of L1 Bulgarian in this case. Notice in the examples listed below that the passive verb form serves on the whole a presentative function in the ICLE-BU examples and the preferred V-S order from L1 Bulgarian may transfer in this case. There were no instances of similar structures with passive verbs in LOCNESS. However, such structures are in principle possible in stylistic inversion in English as passivised verbs, like unaccusative thematic verbs, have only one internal argument and could therefore be subject to the same syntactic derivation as standardly assumed for SI (see Bresnan & Kanerva 1989 and Hoekstra & Mulder 1990 on passive verbs in locative inversion structures). It would therefore seem

that these are best analysed as target-like SI, even though many tokens are infelicitous in context.

- (8.7) a. Among these **are listed businessmen, engineers, computer experts**, and so many others that directly deal with machines in their professional field. (ICLE-BU)
- b. During World War I and II technology advanced with huge steps and for several years **were made one of the greatest discoveries** - the reactive engine, the nuclear power and others. (ICLE-BU)
- c. Ours is an age of inequality and injustice, where to whole nations **have been given death sentences** under the cloak of the political “justice” of hypocrites and Servants of Satan , as a true Christian would call them. (ICLE-BU)
- d. At that time **were introduced three essential key words** which had to do with basic human rights - liberty, equality, fraternity. (ICLE-BU)
- e. It seems that, at lectures, **is given data** which is indeed valuable but which is hard to be applied in actual fact because, usually, it deals with ideal patterns. (ICLE-BU)
- f. Here **is raised the ticklish question** about the financial reward for different jobs. (ICLE-BU)
- g. Even to literature **is given scientific explanation**. (ICLE-BU)
- h. In universirties **is done a lot of high-quality research**. (ICLE-FI)
- i. In the sixties **was born the womens'lib**. (ICLE-FI)
- j. To the positive side **could be listed the possibility** to get information about the happenings in the world quickly and in an understandable manner. (ICLE-FI)
- k. Some 30 years ago **was launched the idea of a Europe bound by the Atlantic and the Ural mountains**. (ICLE-FR)
- l. By economic manipulators **are meant the often large companies that market many different products**. (ICLE-DU)
- m. Among these **can be found: Cassava Enterprises and BetandWin** in Gibraltar, BetonSports in Costa Rica or Unibet in Malta. (WUCLE)

8.3.1.1 Effects of Information Status

Table 8.7 presents the percentage of new vs. non-new referents of inverted subjects. All the groups show similar tendencies and most are within range of the natives. This reveals a clear tendency for SI to be connected to the introduction of discourse-new information.

	ICLE-BU	ICLE-FI	ICLE-FR	ICLE-DU	ICLE-GE	WUCLE	LOC-NESS
% New Subj	89.3	71.5	100	78	87.5	100	87.5
% Non-New Subj	10.7	28.5	0	22	12.5	0	12.5

Table 8.7: Information Status of Inverted Subjects

This need not, however, mean that the information-structure constraints on the occurrence of SI are truly in place for the learners. As we have already established, it appears that those learners who use SI know that this is only possible with unaccusative verbs. A side-effect of this could be that inverted subjects will tend to be discourse-new anyway as the lexical-semantics of the set of verbs involved tends to point simply to the existence of an entity or its arrival on the scene (see Levin & Rapport-Hovav 1995). As the lexical-semantics of the verb is the more primary constraint, the information status of the subject referent is not therefore necessarily a strong *independent* factor.

8.3.1.2 Effects of Grammatical Weight

The average weight of the inverted subject in X-V_{LEX}-S is given in Table 8.8 for each of the subcorpora in the study. It will be suggested that weight also does not play any significant independent role in the production of inversion in the corpora.

	ICLE-BU	ICLE-FI	ICLE-FR	ICLE-DU	ICLE-GE	WUCLE	LOC-NESS
Mean Subj Weight (no. of words)	7.9	5.2	8.7	6.2	4.3	3	5.3

Table 8.8: Weight of Inverted Subjects in Number of Words

Judged by the yardstick of the native English corpora, the data seem to indicate that complexity or phonological weight might be more important in licensing inversion for the learners than it is for the native speakers. However, the very idea of an independent

measure of weight against which the learners can be judged is misleading, and it cannot by itself play a decisive role in licensing inversion. It would be impossible for a heavy subject to be inverted around a transitive verb for example.³² Thus, comparing the learners to the native speakers in this respect is unenlightening. It is unsurprising that the average weight of nominals is relatively heavy as written data would tend anyway to favour the production of relatively heavy or complex NPs. Note, furthermore, that the very idea of constituents being “relatively heavy” is almost impossible to define and operationalise in practise. There is no way to set up independent criteria for what should be considered ‘heavy’ and what ‘light’.

A closer look at the data also reveals that weight is often not an important contributory factor in the production of inversion. Both learners and native speakers produce inversion with light subjects which are appropriate in context (8.8). This confirms that grammatical weight can be overridden by factors such as verb type and discourse context and is therefore not an *independent* factor in the production of SI in the same way that constraints on the type of verb are.

- (8.8) a. **First come e suicides.** (ICLE-DU)³³
b. Furthermore, **with the nationalization arose problems**, like for example declining productivity or failure in introducing new technology. (WUCLE)
c. Somewhere deep inside this perfect country **existed slavery.** (ICLE-FI)
d. As the 80's came to a close there was a greater awareness of AIDS; however, **with the awareness also came discrimination.** (LOCNESS)

8.3.2 Subject-Auxiliary Inversion

8.3.2.1 Interrogatives

Interrogative syntax conforms overwhelmingly to target English SAI in all the learner corpora. There are isolated instances of non-target word order in questions in each of the learner subcorpora. The non-target patterns are, however, similar across the corpora

³² Refer again to Culicover & Levine (2001) for arguments to the contrary, but as discussed in Chapter 1, the evidence they present in favour of the idea that weight is an important *independent* factor in SI is questionable at best.

³³ All examples from the learner corpora are presented as they occur in the corpora, including any orthographic errors.

and are best analysed as being due to the nature of the input and general learning principles rather than L1 specific transfer.

The overall number of questions produced in the learner corpora and the number that diverge from target English interrogative syntax are given in Table 8.9.

	ICLE-BU	ICLE-FI	ICLE-FR	ICLE-DU	ICLE-GE	WUCLE
No. Questions	320	340	390	303	421	49
No. Non-target questions	8	12	10	4	8	0

Table 8.9: Occurrence of Non-target Interrogative Syntax in Learner Corpora

With the exception of WUCLE, on average 2.5% of questions have non-target word order. These fall into three broad categories, which, it will be argued, are due to general difficulties in mastering the complexities of English interrogative syntax rather than transfer. The three categories are: i) overuse of *do*-support, ii) non-inversion, iii) non-target inversion.³⁴

Overuse of Do-Support

The overuse of *do*-support is restricted to the four instances given in (8.9).

³⁴ I choose ‘non-target inversion’ as a neutral term to avoid implying that this involves thematic verb movement. As will be outlined below, while these structures often appear on the surface to show thematic verb movement, a more principled explanation is available.

- (8.9) a. A little child in conversation with his mother asks her **what sound does the mouse produce?** (ICLE-BU)
 b. How many American soldiers **did actually make it** to the battlefield? (ICLE-DU)
 c. At the end of this essay I wonder if our society is really superficial in such a way that this man-made enjoyments **do they really compensate the need for love?** (ICLE-GE)
 d. **Do times really have changed?** (ICLE-GE)

Do-support is extended in these examples to embedded interrogatives (8.9a & c), and is overused in subject-*wh*-questions (b), or where there is already an auxiliary which should raise to C (d). On the whole, it would seem that there is a marginal tendency for the learners to overgeneralise SAI to embedded contexts, where it is not grammatical in standard English.³⁵ While the analysis which immediately suggests itself is that this is a straightforward case of overgeneralisation based on the input, it might also be argued that the overuse of *do*-support in (8.9b-d) in fact shows the transfer of a V2 constraint. Notice that in each of these examples from V2-L1 learners, *do*-support could be functioning to maintain V2 in the absence of the possibility of thematic verb movement. However, embedded interrogatives in German, like other embedded clauses is not V2. It would seem therefore that this is a case of overuse of an English structure rather than transfer of a German mechanism. This use of *do*-support is also interesting for subject *wh*-questions, only four of which are produced by V2-L1 learners (2 in ICLE-GE, 2 in ICLE-DU), and one has surface non-target V2 order. While this is an intriguing idea, in the wider context of patterns with other types of questions, it would seem more likely that transfer is not the root of problems with word order in interrogatives. Similarly, there are independent analyses for the production of inversion in embedded questions as it can be assumed that all questions are simply treated the same in terms of their syntax (e.g. Bley-Vroman's 1997 analysis of L1 Hebrew speakers' production of embedded SAI as an example of overextending SAI to all question contexts).

Non-Inversion

The examples in (8.10) illustrate either a lack of inversion of *be* (a-b) or the lack of *do*-insertion to form a question (c-l). There are no instances where an aspectual or modal

³⁵ This is, however, grammatical in at least one non-standard variety of English, see Henry (1995: 106) on embedded *wh*-questions in a variety of Belfast English.

auxiliary remains in situ; the problem is therefore specific to *do*-support, rather than T-to-C movement per se. Where an auxiliary is available for movement, it is moved. In addition, the thematic verbs in these examples remain in VP. It would, therefore, seem that the learners on whole do not permit thematic verb movement and that the residual V2 constraint in English interrogatives has also on the whole been mastered. There is a continued marginal difficulty with the use of *do*-support to fulfil the residual V2 constraint.

- (8.10)
- a. But let us be honest: it is not better to shout with 16 than to shout alone if you want your voice be heard? (ICLE-NL)
 - b. It is possible to smooth away all the differences between this series of countries which have more and less diverging histories and cultures? (ICLE-FR)
 - c. How freely an artist may express oneself? (ICLE-FI)
 - d. For what purposes people then use this so called opium? (ICLE-FI)
 - e. Why people with university degrees seek for job through news advertisements? (ICLE-FI)
 - f. Why people watch television? (ICLE-FI)
 - g. How there can be any social life if people prefer watching television to communicating with other people? (ICLE-FI)
 - h. Why, then, so many people object to gay marriages and, at the same time, yearn for equality? (ICLE-FI)
 - i. How much their effort cost? (ICLE-BU)
 - j. Why then it happens so that today we lead a much busier and tenser life than our grandparents did? (ICLE-BU)
 - k. Then why not dream and imagination be worthy of presence in the modern world of science as religions are? (ICLE-BU)
 - l. Why on Earth prospective Bulgarian teachers need a profound knowledge of Old Greek? (ICLE-BU)

Non-Target Inversion

Non-target inversion is the most widespread non-target word order in the learner corpora accounting for 62% of non-target questions (see Table 8.10).

	ICLE-BU	ICLE-FI	ICLE-FR	ICLE-DU	ICLE-GE	Total
No. Non-target inversions	3	6	9	2	6	26

Table 8.10: No. of Non-Target Inversion in Questions

Inversion of main verbs would indicate the transfer of thematic verb movement to C. Many of the instances in the corpora appear to show thematic verb movement; however two clear patterns emerge, which are not straightforward examples of the transfer of verb raising: firstly, the overextension of T-to-C movement to thematic verbs homophonous with auxiliaries, which account for 19% of the occurrences of non-target inversion (8.11).³⁶

- (8.11) a. **Has television** as much influence on people as religion had in former days? (ICLE-DU)
- b. **What have Serbia, Croatia and Bosnia** to do with happiness? (ICLE-GE)
- c. **Did it anything** to their cruel and brutal way of coldly killing innocent people? (ICLE-GE)
- d. **What good does the supreme penalty?** (ICLE-FI)

Secondly, there is a marked tendency for inversion to be extended to infinitival and participial forms of *be*, where this is not acceptable in English. This accounts for 65% of the non-target inversion structures in the corpora (as in 8.12).

- (8.12) a. **What would be the world like** if Columbus did not have any dreams of New lands? (ICLE-BU)
- b. However, if it hadn't been for some strong women who enchained this emancipation movement, **how would have been the women's situation** today? (ICLE-DU)
- c. **What will be the price to pay?** (ICLE-FR)
- d. Very nice, but **what will be reality like?** (ICLE-FR)
- e. **Shouldn't be there** a speed limit on German motorways in order to avoid such photos in future? (ICLE-GE)

³⁶ Note that the occurrences of thematic *have* in these examples may in fact be acceptable in various varieties and registers of English and could possibly be available in the input. The status of *have*-raising as non-target is therefore questionable in this context.

In the case of the L1 German and Dutch subcorpora, these instances cannot be the result of transfer of a V2 movement operation as infinitival and participial forms remain in situ in German and Dutch. Taken together with the data above, where inversion is extended to the homophonous thematic equivalents of auxiliary verbs, it seems clear that the nature of the English input is the root cause of these divergent word order patterns. Thus the auxiliary/thematic distinction is problematic, and in a minority of cases, it seems that learners extend the syntactic behaviour of auxiliaries to homophonous verb forms. In the case of *be*, it seems that the problem is one of overgeneralisation, whereby a more consistent V2 pattern is applied to all forms of the verb even where the non-finite forms in periphrastic tenses should not raise.

The remaining instances of non-target inversion which do not fit into either auxiliary/thematic confusion or *be*-raising patterns are presented in (8.13).

- (8.13) a. What means eternal, everlasting, rarefied and praiseworthy if not the deal or contract one has just? (ICLE-BU)
b. How would behave people who stayed in the army less than a year in case of war? (ICLE-GE)
c. What implies this? (ICLE-FR)
d. Exclude this two things themselves mutually? (ICLE-GE)

These are given without further discussion for the time being. They appear to be true instances of thematic verb movement, at least in the L1 French and German cases, where this movement operation might transfer. It is striking that these examples are reminiscent of the structures Roeper (1999) points to as instances of V2 overgeneralisation by children acquiring English as their native language. Given this, and in the context of the results of the grammaticality judgement task, the examples in (8.13) point perhaps to a significant generalisation on the nature of word order variation in the interlanguage of L1 German speakers, and perhaps also for learners of English from other L1 backgrounds and is discussed in more detail in Ch. 10.

Overall, the results for questions show that the nature of residual V2 after interrogative operators in English has been acquired by the learners, and that residual V2 is realised in a target-like manner with *do*-support and SAI in the overwhelming majority of cases. There are continued residual difficulties in certain restricted contexts but on the whole these can be captured by reference to the nature of the English input and processes such

as overgeneralisation based on surface forms. There is only very limited evidence for the transfer of thematic verb movement in the V2-L1 corpora, i.e. one instance in ICLE-GE. There are no major distinctions between the V2-L1 learners and the non-V2-L1 learners and where there are residual difficulties with interrogative word order, these occur across all the corpora which further supports the notion that general processes of overuse and generalisation based on the input are more likely explanations than any L1-specific transfer difficulties.

8.3.2.2 Negative Inversion

The distribution of negative inversion contexts, i.e. where SAI would be a requirement in English, is outlined in Table 8.11.

	ICLE-BU	ICLE-DU	ICLE-FI	ICLE-FR	ICLE-GE	WUCLE
NI Contexts (% Texts)	10.9	11.7	13.1	5.5	9.8	21
Distribution (10,000/w)	1.83	1.46	1.81	0.98	2.12	0.85

Table 8.11: Negative Inversion in Learner Corpora

In contrast to the results from LOCNESS and the results presented above for residual V2 in interrogatives, SAI in negative inversion contexts appears to be optional *at the group level*, and not fully acquired. Figure 8.2 shows the rates of auxiliary T-to-C after fronted negative operators in each of the learner subcorpora. In terms of the acquisition of the V2 properties of English, this then lags behind the more target-like knowledge of the parallel structures in interrogative syntax. There is also optionality at the individual level. For example, in ICLE-GE only seven learners produce more than one negative inversion context, four of whom produce target inversion consistently (text codes SAL-3.2, AUG-101.1, AUG-25.3, AUG-13.4). One text with more than one NI context has no target inversion (SAL-8.2). The remaining two learners (SAL-2.2, AUG-83.3) show optionality, producing both target NI and non-inversion (Ex. 8.14).

- (8.14) Only in 1959 the famous "Godesberger Programm" indicated a shift in the SPD's attitude. (GE-SAL-2.2)
 The SPD did not want to join NATO nor did they want a West German army. (GE-SAL-2.2)

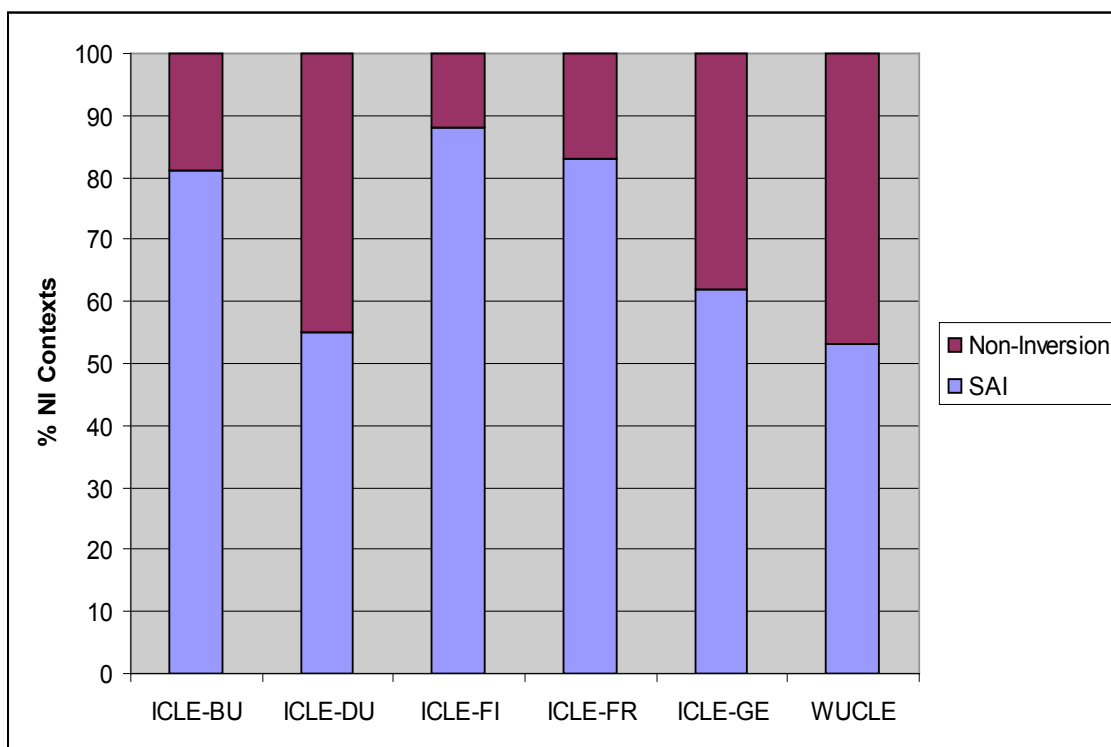


Figure 8.2: Percentage SAI after Fronted Negative Operators.

It is also striking that the V2-L1 learners consistently produce less SAI after negative operators than the other L1 groups. The V2-L1 learners produce target SAI on average in only 57% of NI contexts, illustrating that it appears to be truly optional for these learners considered as a group.³⁷ The non-V2-L1 learners have target SAI in 84% of NI contexts (Figure 8.3). This would seem to show that the V2-L1 learners on the whole do not have a target representation of NI while the non-V2-L1 groups have a much more target-like grammar in this respect.

³⁷ This of course does not entail that negative inversion must *necessarily* present residual problems for individual learners and a number of learners who produce NI do so consistently and in a target-like fashion. As an illustration, throughout the learner corpora, 21 participants produce more than one instance of NI. Of these, the majority (n=13) have consistent SAI, 6 have optionality, producing both SAI and uninverted orders, and 2 produce only uninverted orders. Nevertheless, in comparison to the results for questions, it is clear that the nature of V2 after fronted negative operators causes significantly more problems for all the learners at the group level, and appears to pose a particular difficulty for those learners whose L1 has a general V2 constraint.

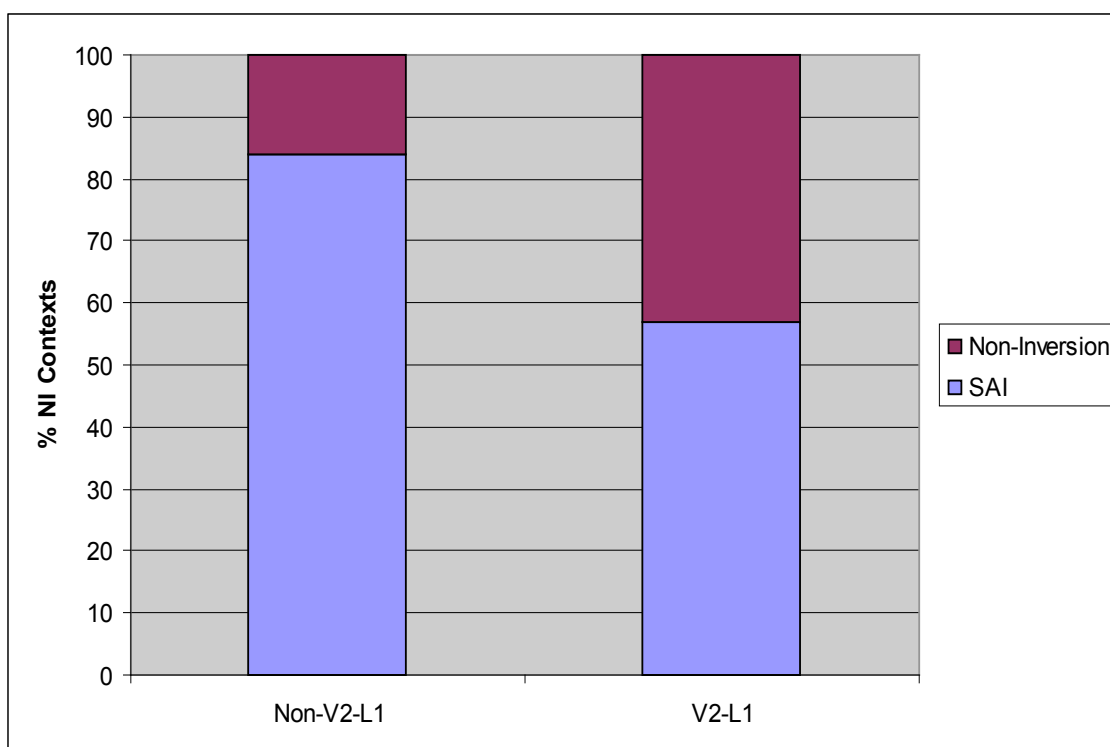


Figure 8.3: Negative Inversion in V2-L1 and Non-V2-L1 Corpora

The reason why NI lags behind in general may be traced back to the effects of grammar instruction. The details of negative inversion, if at all covered in language classes, are usually not part of teaching materials until advanced levels of university courses. Therefore given the rarity of the structure in the input, in combination with the fact that NI has perhaps not been taught in language instruction, it is unsurprising that this V2 property of English lags behind that for questions, which are taught and are frequent in the input. However, these arguments presumably apply to all of the learner groups and the need therefore arises to explain why the V2-L1 speakers seem to have more difficulty than the other L1 groups.

A plausible assumption would see this as hypercorrection as a side-effect of explicit instruction in tandem with psychotypical effects. In German and Austrian schools, it is usual to cover the distinctions in word order between English and German by emphasising that English has (A)S(A)VO order in contrast to German V2. Thus word orders which the learners might perceive as calques too similar to L1 word order are likely to be avoided on the assumption that English is always V3 in declaratives and any departure from this is ‘wrong’. The effect of explicit teaching may have the added consequence of reinforcing this tendency and leading learners to consciously monitor

their output for V2 ‘mistakes’. Robertson & Sorace (1999) also report that the intermediate-level German L1 learners in their study appear not to have acquired NI. They suggest that this is perhaps also the result of explicit learned grammatical knowledge and reflects overgeneralisation of a uniform V3 grammar for English declaratives at the intermediate stage before establishing residual V2 at the most advanced stages. The comparative data presented above suggest that this is a particular problem for V2-L1 learners and that other learner groups arrive more easily at a target-like grammar for English, at least in terms of differentiated V2 properties. This is connected to the difficulty Sorace (2005) points to in that V2-L1 learners of English must overlay their consistent V2 pattern on the inconsistent pattern of English.

While Robertson & Sorace (1999) mention the effect of explicit teaching, this can be expanded for NI by invoking the Competing Systems Hypothesis (Rothman 2008). Rothman shows that advanced tutored L1 English learners of L2 Spanish show variability in the realisation of aspectual morphology in contexts where formal instruction usually provides a rather simplified set of ‘rules’ such as trigger words, or English translation equivalents to teach the aspectual distinctions. By contrast, naturalistic learners show no divergence compared to native speakers. Thus “it is reasonable to believe that these pedagogical rules are consciously accessed in discourse as an output monitor by many L2 learners, resulting in surface morphological errors despite a morphosyntactic competence that is fundamentally native-like” (Rothman 2008: 99). The same sort of application of a system of learned rules might be at work in the V2-L1 corpora. The results for interrogatives show that the V2-L1 learners have no problems acquiring V2 in English *per se* where this is grammatical. An important difference is the role of explicit teaching. Word order in questions tends to be taught as an exception to the ‘normal’ rules of English word order. By contrast, word order in declaratives tends to be contrasted with the L1. It would seem that the learners apply this rule consistently in monitoring their output and thus produce ungrammatical patterns with fronted negative operators.

Negation vs. Restriction

A more differentiated examination of the patterning of auxiliary (non)-movement in negative inversion contexts reveals that in addition to distinctions according to L1 there are certain distinct patternings of SAI depending on the type of fronted XP. Where the fronted constituent is headed by an overt negator (e.g. not, never, neither, nor, etc.), there is a tendency for the learners to produce SAI more consistently than after restrictive XPs (i.e. PPs headed by ‘only’ or the adverbials ‘rarely’, ‘seldom’). Compare Figures (8.4) and (8.5)

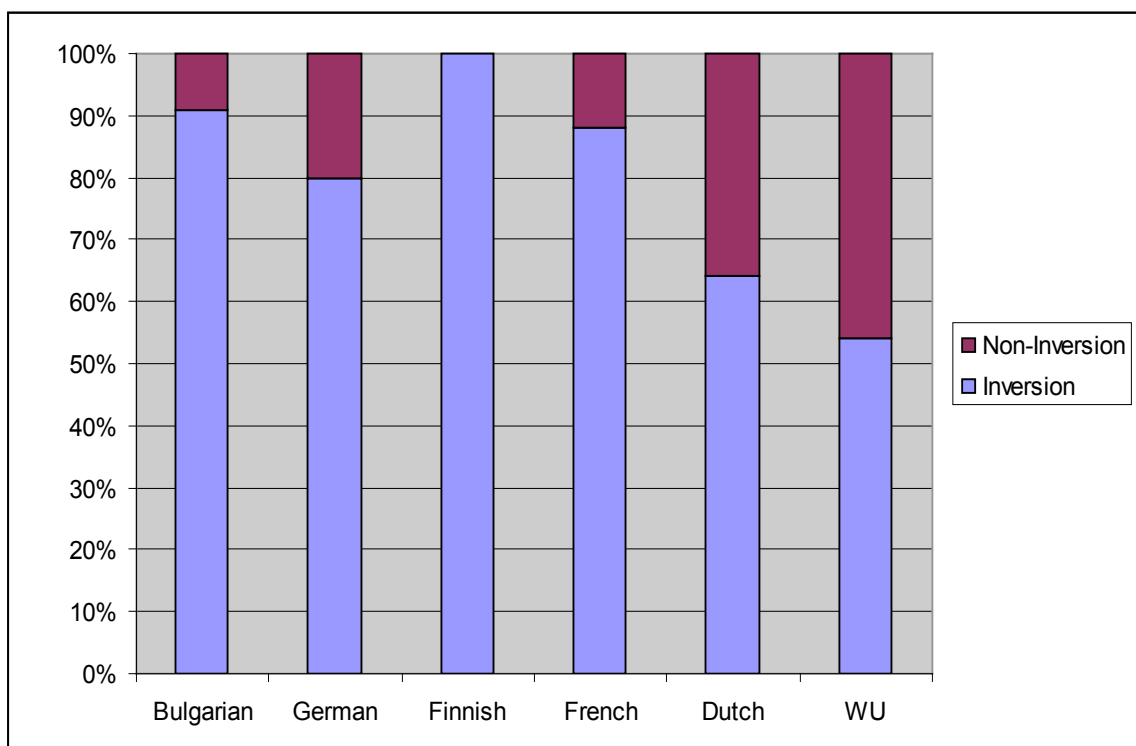


Figure 8.4: Rate of SAI/non-inversion after negative XPs

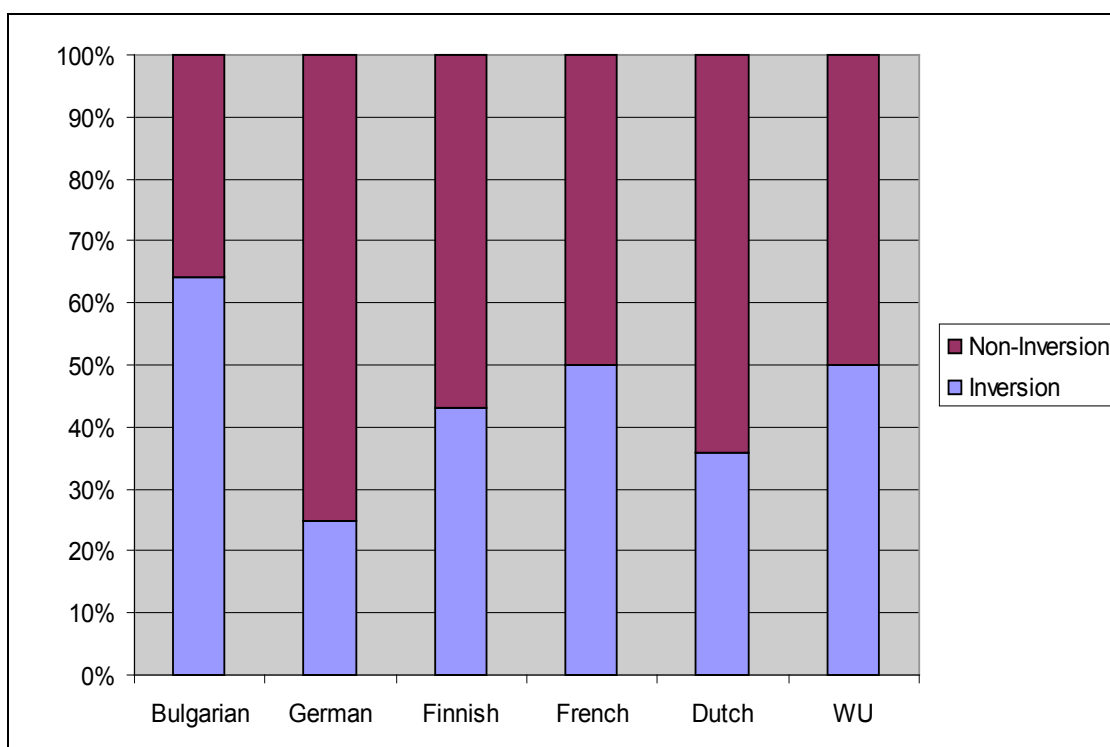


Figure 8.5: Rate of SAI/non-inversion after fronted restrictive XPs.

This would suggest that the learners on the whole have relatively more consistent grammars for SAI when the fronted constituent involves an overt negator. The pattern is particularly striking for ICLE-FI, where SAI is consistent and completely target-like after fronted negative XPs but occurs in less than 50% of the required contexts with fronted restrictive XPs. Similar patterns obtain for all the learner groups, although the distinction between negative XPs and restrictive XPs is not as marked in ICLE-DU and WUCLE as for the others. It would appear that restrictive XPs are more likely to have the status simply of any fronted adjunct constituent for most learners, while overt negation is more likely to have the status of a syntactic operator and force SAI.

This may provide evidence of a constructionist, pattern-matching approach to the L2. Overt negators occur more frequently in NI structures in the input and are likely established quickly as prototypical inversion structures. Restrictives are only acquired later, if at all, as triggers for inversion. This tendency could be reinforced by the effects of teaching. Even though NI tends not to be taught until the most advanced levels of EFL courses, where it is taught, this often involves illustrating that fronted *negation* gives rise to SAI. Thus learners could come to be more sensitive to the surface

properties of the fronted constituent and apply a learned rule of the form “inversion after *negation*.” The two factors might indeed be mutually reinforcing.

8.4 The Transfer of V2

Having now established the extent to which English V2 and inversion structures have been acquired by the learners, we move to instances where inversion is ungrammatical and diverges from any expected context in English and may therefore be taken as evidence of a residual V2 constraint.

8.4.1 Subject Auxiliary Inversion in Declaratives

It seems that transfer of V2 is in evidence only with a restricted range of inversion structures, these can be identified by the type of verb in XVS sequences (Ex. 8.15).

- (8.15) Accepting further trade liberalisation would mean to give up preferential access to some developed markets, additionally **would it** increase relative prices for them, being a net importer of food commodities. (WUCLE)
Nowadays **do not only students** cry out loud, but it's especially their parents who run amok among schools and ministeries... (ICLE-GE)

The most obvious difference between the V2-L1 learners and the other L1 groups is in the number of declarative XVS structures where the subject has been inverted with an auxiliary verb (not including NI). For the V2-L1 learners, X-V_{AUX}-S accounts for 10.9% of all instances of inversion in declaratives, while for the non-V2-L1 learners, only 3.7% of inversion involves an auxiliary. Unsurprisingly, apart from NI, there is no inversion of auxiliaries in declaratives in the native corpus. Similarly, X-V_{AUX}-S is much more widely distributed in the V2-L1 corpora (Table 8.12).

	ICLE-BU	ICLE-DU	ICLE-FI	ICLE-FR	ICLE-GE	WUCLE
Ungramm -atical aux- inversion (% learners)	0	1.6	1.6	0.4	2.7	4.8

Table 8.12: Rate of non-target SAI in declaratives

This difference becomes even more striking when one considers the patterning of auxiliary inversion across the non-V2-L1 corpora. These occur namely only in ICLE-FR and ICLE-FI and the single token from ICLE-FR (8.16) has an independent explanation.

(8.16) And maybe will we be able to comprehend why so many people have followed him

This is in fact a calque of a French structure, which would also permit inversion after *peut-être* (the equivalent of *perhaps*) as in Ex (8.17).

(8.17) Et peut-être peut-on comprendre pourquoi....

Perhaps the lexical properties of *peut-être* have been transferred onto English maybe allowing inversion. The salient point is that it is not a general problem with the word order of English which is at stake here, rather an isolated example of (lexical) transfer from French, thus making the commonalities in the V2-L1 groups' production seem more strongly to favour a transfer analysis.

This leaves occurrences of X-V_{AUX}-S only in the V2-L1 subcorpora, where it assumed to indicate the transfer of V2, and in ICLE-FI. The ICLE-FI data obviously then requires some independent explanation. Given that both Finnish and Swedish enjoy official status in Finland, it would not be unexpected that these structures might in fact also be due to V2 influence via Swedish. Indeed, the four Finnish L1 learners who produce X-V_{AUX}-S sequences all share the same constellation of first and second

foreign languages with Swedish and German as their other foreign languages.³⁸ It is therefore likely that the X-V_{AUX}-S tokens in (8.18) from ICLE-FI are the result of the influence of another learned foreign language on English (see for example Bohnacker (2006) on influence of L2 on L3 with regard to acquiring verb second in a foreign language).

- (8.18) a. **Too often do people have such stereotyped ideas** as, first the child must learn one language (the mother tongue) properly and only then the child can start learning another language.
- b. **From that onwards has American English (the variety of English spoken in North America) had** a great impact on spreading the language all over the world and today 215 million of the 300 million native speakers of English are American.
- c. In England and Germany **where has the juvenile crime risen** the public and politicians have become more favourable for introducing the penalty.
- d. As Latin was the language of education in the middle ages and French the medium of diplomacy, **is English today very rapidly becoming** the predominating language in both of these and also other branches of language usage. (ICLE-FI)

Assuming then that there is an independent explanation for the Finnish data in terms of transfer from another learned foreign language, it seems reasonable from a comparative perspective to take X-V_{AUX}-S examples from the Germanic L1 subcorpora to be instances of V2 transfer. This is very much in line with Robertson & Sorace's (1999) corpus-based results, where there was no raising of lexical verbs. They also point out that other structures such as omission of subjects may even be used to maintain V2 (Robertson & Sorace 1999: 317). As an aside, there are empirical problems with assuming that subject omission or other structures are the results of transferring V2 from German as this is not a possible operation in native German to maintain verb second, and so this was not investigated in the present study. Nevertheless, it would seem that the finding that thematic verbs do not raise to maintain V2 order in L1 German-L2 English interlanguage is quite robust. There is very limited evidence for the movement of thematic verbs in ICLE-DU and WUCLE (see Chs. 9 and 10 for results discussion of the status of equative verbs).

³⁸ Text codes for the learners: ICLE-FSW-ABO-0007.3, ICLE-FIN-JOEN-0019.1, ICLE-FIN-JOEN-0007.1 and ICLE-FIN-JOEN-0013.1.

The examples of auxiliary inversion from ICLE-GE, ICLE-DU and WU are given in (8.19-8.21). On the assumption that the production of an instance of ungrammatical V2 indicates that a learner retains a residual V2 constraint, up to 5% (WUCLE) of learners at the final stages of tertiary level instruction in English still have not definitively lost V2.³⁹ It might be questioned whether a single production of V2 by a learner can be taken as evidence that that learners retains a V2 constraint. I would argue, however, that the production of ungrammatical V2 in written, self-monitored production is a fairly significant indication that the learner retains residual V2 as part of their competence (in Sorace's (2000: 98) sense of "a potentially permanent stage ... at which the target option is strongly, but not categorically preferred, and the dispreferred non-target option ... still surfaces in some circumstances.").

- (8.19) a. And secondly, **can the government effectively use** television to control and influence the public opinion
 b. **Only has this place become** smaller.
 c. This excellent example of this principle, **can we find** whenever two countries or nations went to war.
 d. Already then **did America see itself** as a kind of global cop (they used the term very frequently in post-war months).
 e. And still **do they have** a very powerful army. (ICLE-DU)
- (8.20) a. For them it is quite frustrating to see other peoples who are rich from birth, and **whom will everything be put** in their laps because the have the right connections to certain circles.
 b. Therefore **should TV commercials be banned**.
 c. So long **did I have to queue** for the practical that I was thinking about nicking the secretary's cheese and ham toasty...
 d. Even slower **did emancipation proceed** in religious fields.
 e. Nowadays **do not only students cry out loud**, but it's especially their parents who run amok among schools and ministeries...
 f. Here **is birth given** to the word "one" ("man" in German, "on" in French) which replaces individuality by generalization.
 g. How wonderful **would life be** with such a program.
 h. How peaceful **will life be** when his work will be done!
 i. How old **must they be** indeed!
 j. What hardships **did I have to undergo** on my way to the "sacred fields" of the ever so expensive warehouse!
 k. How joyful **can it be** to read a good book, how much can we learn from it and how great is it to travel into anew and unreal world. (ICLE-GE)

³⁹ These percentages are a minimum. Copula *be* provides further non-target V2 structures; however, given that *be* has V2 distribution in English anyway, it is difficult to definitively count how many instances are the result of V2 transfer and how many are the result of non-target overgeneralisation based on the input.

- (8.21) a. Within the European Union not only the attitude towards the use of anglicisms varies, but **also is English used** on different levels.
- b. Accepting further trade liberalisation would mean to give up preferential access to some developed markets, additionally **would it increase** relative prices for them, being a net importer of food commodities.
- c. As a consequence, the flow of information and knowledge between the units of a MNC will be restricted to a small amount of people with the right language skills, **may this be** the local subsidiary's language or the common corporate language. (WUCLE)

While this sort of inversion of modal or aspectual auxiliaries is ungrammatical, there is a slight question mark over the status of the sentences in (8.20 g-k), which it might be suggested could be licit in English as instances of exclamatory inversion. However, *wh*-exclamatives are standardly assumed not to involve inversion in English (Radford 2004: 222). For example, in Huddleston's (1993) analysis of exclamatory inversion sentences, he cites only those of the form 'Boy, is syntax easy!' (Huddleston 1993: 259, originally in N. McCawley 1973) and assumes *wh*-exclamatives are without inversion, as in 'How easy syntax is!' Biber et al (1999: 219) similarly exemplify *wh*-exclamatory sentences only without inversion. The problem with (8.20 g-k) is establishing whether or not these are instances of exclamatory *wh*-questions, where inversion would be necessary, or *wh*-exclamatives, where inversion would not be motivated. It is possible that these are *wh*-exclamatives involving transfer from German, where identical structures would be grammatical and pragmatically felicitous, see (8.22). However, German also allows verb final exclamatives as in 'Wie wunderbar das Leben ist.' There is no evidence for the transfer of this structure. This may again be the result of the perception of markedness as verb-final structures are never encountered in English, while V2 order with *wh*-elements is. Inversion after exclamative *wh*-constituents may therefore show the influence of overgeneralisation of interrogative word order.

- (8.22) a. How wonderful **would life** be with such a program.
Wie wunderbar wäre das Leben....
- b. How peaceful **will life** be when his work will be done!
Wie ruhig wird das Leben sein, wenn....
- c. How old **must they** be indeed!
Wie alt müssen die doch sein!

It is possible that this is transfer of an information structural pattern rather than syntax per se, a point which is particularly relevant with inversion of copula *be* and to which we return below. In this particular case, it is conceivable that the pattern transfers as a chunk in its entirety. Whatever the explanation for these particular sentences, it is clear from the wider picture that a small minority of learners still have V2.

This is particularly clear in those instances where learners resort to the use of expletive *do*-support to maintain V2 order where there is no available modal or aspectual auxiliary which might have been raised to C. The fact that this is not a possible operation in the L1 to maintain V2 order shows that the learners who use it have acquired the fact that thematic verbs do not move in English but that *do*-support and auxiliary raising is a licit syntactic operation in English to fulfil V2 word order where this is a syntactic requirement, as in interrogatives. Thus, in line with previous studies (cf. Hulk 1991; Robertson & Sorace 1999) it seems that verb movement syntax does not transfer at more advanced stages of acquisition, while V2 realised by mechanisms other than thematic verb movement still does.

Also in line with Robertson & Sorace's findings is the fact that there appears to be no consistent pragmatic, informational or stylistic commonalities in the type of fronted constituent, which might motivate inversion. As the lists in (8.19-8.21) show, both argumental and adverbial constituents occur in clause-initial position in the V2 clauses and the adverbial constituents fulfil a range of different functions. Thus there is no specific type of constituent or discourse status of particular elements which seems to trigger V2 (but refer to Chapter 10 for a more detailed analysis from a slightly different perspective).

Although it has been suggested here that there is no movement of lexical verbs in V2 and transfer is only in evidence in the placement of auxiliaries, there are three instances of surface V2 with a thematic verb, where the structure is not stylistic inversion as the verb involved is transitive (8.23). It could be assumed that these three instances are production errors or are the leftovers from an earlier stage of acquisition, where learners had still allowed thematic verb movement. However, there is no correlation between the production of this sort of inversion and other ungrammatical V2 patterns as the learners

who produce these structures do not also produce V2 with auxiliary inversion. The very restricted number of instances also does not permit a more extensive analysis. However, (8.23a) is informative of the sort of V2 overgeneralisation with equative verbs which Roeper (1999) identifies in child English and which seems to also be in evidence in a restricted set of the interrogative data (we return to this issue later).

- (8.23) a. An example for this combination **offers** the German band Die Ärzte. (WUCLE)
 b. On the other hand, however, **experienced** the lower classes the social excesses of this economic boost. (ICLE-DU)
 c. Just like the police was not all clear, so **made** the prosecution the mistake to withhold evidence which suggested innocence. (ICLE-DU)

8.4.2 Inversion of Copula Be

On the whole, inversion around copula *be* serves to indicate that all learners by this advanced stage of acquisition have no problems with recognising that, unlike other main verbs, it has V2 distribution in English. Inversion occurs in all of the corpora in 100% of expected contexts. There is no instance of ungrammatical V3 patterns with *be*. Table 8.12 gives an overview of the distribution of *be*-inversion in the corpora.

Distribution Be- inversion	ICLE- BU	ICLE- FI	ICLE- FR	ICLE- DU	ICLE- GE	WUCLE	LOC- NESS
% Learners	9.9	9.0	3.6	8.5	6.1	9.7	7.8
p/10,000 w	1.78	1.31	0.65	1.24	1.35	0.33	1.26

Table 8.12: Inversion of copula *be* in the corpora

However, there is continued divergence in certain contexts from target norms of inversion patterns. These can be categorised as i) anomalous inversion, i.e. inversion after a fronted adjunct where this would not be required in English, and ii) anomalous fronting, i.e. where inversion would be required as a complement is fronted but where the complement itself would not be fronted in English.

Anomalous Inversion

We deal first of all with anomalous inversion as this involves more straightforward data and analysis. There two instances each in ICLE-GE and ICLE-DU with *be*-inversion after an initial non-complement constituent. These appear to be straightforward examples of the transfer of V2 in these contexts (8.24).

- (8.24) a. **So is television** opium for the masses. (ICLE-DU)
- b. **On the whole is the Victorian era** characterised by a strict, puritanic outlook upon life, which was inspired by her. (ICLE-DU)
- c. Promenade along splendid arrays of colourful flowers straight to a big market square, **where's always a great hustle and bustle** especially on sundays. (ICLE-GE)
- d. Basing n their dreams to create a world where fun and love win instead of the restlessness and seriousness of the adults, where a smile can help you to forget your little sorrow and **where also is time for tears**. (ICLE-GE)

There are instances of inversion from ICLE-BU, and one in ICLE-FR which illustrate a similar pattern, see (8.25). In the case of ICLE-FR, it can again be assumed that this is indicative of an L1 word order pattern, as stylistic inversion in French around *be* follows much the same functional characteristics as in English. Similarly, in ICLE-BU, it can be assumed that this is due to functional-pragmatic considerations. In addition to which, recall that the relatively free word order Bulgarian allows for V-S inversion and this is in fact the communicatively unmarked option in contexts where the subject is not given any particular emphasis or information-structural prominence. Again, therefore, while the surface patterns are the same, it seems likely that there are different underlying causes for inversion for the different L1 groups in this case.

- (8.25) a. The worst thing is that not only the spendigs are doubled but **also is the pain**. (ICLE-BU)
- b. **What is the trouble here** is that there have emerged for the last five or six years in Bulgaria a couple of private colleges and universities which give a certificate identical to the one taken in an established institution. (ICLE-BU)
- c. **But often were there people** who managed to get beyond their own times, who were labelled at the best of times dreamers and at the worst-sinners, insane , etc. (ICLE-BU)
- d. **Particularly after World War I was the world around them** a world instable where everything was questionned, where the old traditional values were no longer of any use. (ICLE-FR)

It is somewhat surprising that there is inversion around discourse organising adverbials in LOCNESS, all of which are listed in (8.26).

- (8.24) a. **Finally, is** the issue of capture and punishment.
- b. **Firstly, was** Europe's realization of her own weakness, after having lost her age-old position at the centre of the world stage to the United States of America and to the Soviet Union.
- c. **Secondly was** the conviction that military conflict should in the future be avoided; after all, the two great wars had both begun as European "civil wars"
- d. **Thirdly was** the common desire for a better, freer world in which international relations would be conducted in a more orderly way

These seem only marginally acceptable and this category of fronted adverbial is generally not covered in reference or theoretical literature as a possible trigger for inversion. However, three of these occur in the same text and can therefore be disregarded in the main as a likely idiosyncratic stylistic choice on the part of one of the corpus participants.

Anomalous Fronting

What I have termed here 'anomalous fronting' is also in evidence in all the learner corpora. The issue of whether or not there are different structural or representational analyses for these patterns is somewhat more difficult to resolve and, in principle, it could be the case that the different learner groups produce similar non-target patterns as a result of the ambiguous input evidence in English. Figure 8.6 displays the percentages of types of fronted complements in *be*-inversion structures in each of the corpora. To establish a baseline for the types of context where inversion around *be* might felicitously occur, we will look first of all at the patterns of fronted complements in LOCNESS.

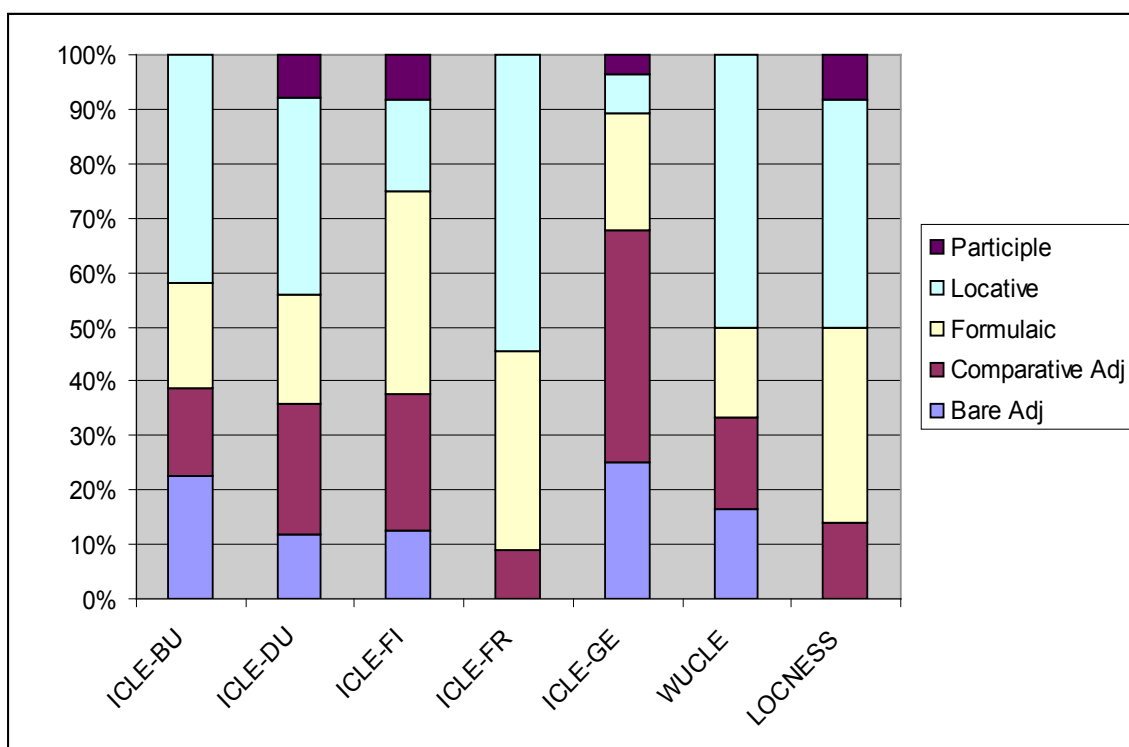


Figure 8.6: Types of Fronted Complements in *be*-inversion contexts.

The natives produce in the main the expected patterns with the majority of inversion involving fronted locative complements, i.e. locative or stylistic inversion, which accounts for 41.7% of these inversion structures. In addition, what has been coded here as ‘formulaic’ is of the form of subject-*be* inversion after *as*, *so* and *such* in positive rejoinders (8.27), and ‘participle’ refers to fronted adjectival participles (8.28⁴⁰).

- (8.27) a. Other European nations are divided down into smaller federal regions, **as is the case in Switzerland**.
 b. Not only are parents hiding but **so are the churches**.
 c. **Such is the effect of alcohol** in the south and thus people are more given to drunkenness.
- (8.28) a. **Gone are** the days of unknown and unheard of areas.
 b. **Gone is** the age that the woman is required to stay home.
 c. **Gone are** the days when a person who wanted money from a bank had to wait until it was open.

More relevant are the instances of inversion around adjectival complements. In native English, as reflected in LOCNESS, inversion around adjectival complements is licensed

⁴⁰ These might also be analysed as remnant VP topicalisation. Only the instances in (8.26) are produced by the LOCNESS participants and it seems to have a specifically constructionist flavour.

when the fronted AdjP has some comparative element which links it to the immediately preceding discourse. This might be either an overt comparative as in (8.29) or some additive element which serves to establish an overt relation with a previous predicate (8.30).

(8.29) **More importantly then is** the question of 'Is it right to deprive a child of life because of genetic defects'.

Even more alarming is the fact that heroine, LSD, and peyote are other Schedule 1 drugs.

(8.30) **Also taught in his curriculum was** that women who have abortions are more “prone to suicide” and up to 10 percent of them will never again conceive.

Also related to this topic is nuclear waste.

However, this does not apply to what I will call ‘bare’ adjectives, i.e. without any comparative element or overt connection to a predicate that had been previously evoked in the discourse. Fronting either a bare predicative (8.31) or attributive adjective (8.32) followed by inversion gives rise to ungrammaticality in English.

(8.31) That was a boring lecture.

*Boring was that lecture.

(8.32) That lecture was boring.

*Boring was that lecture.

This distinction is important when compared to the inversion patterns in the learner corpora. Most of the instances of inversion in the learner corpora follow the same pattern as in the native corpus to the extent that the initial constituents are on the whole the same, as illustrated in Figure 8.6. One distinction, which may indicate the transfer of V2 is the presence of inversion after bare fronted adjectives in ICLE-GE, ICLE-DU and WUCLE (8.33). Similar structures are possible in German, where there are few constraints on what may occupy the prefield.

- (8.33) a. **Dead are** only those whom their family and friends forget. (ICLE-GE)
 b. **But grey is** all theory. (ICLE-GE)
 c. **Essential is** just who decides what we can watch and why. (ICLE-GE)
 d. **Striking is** the absence of self-esteem in the black community in the story. (ICLE-DU)
 e. **Ironic is** Jim's remark about this. (ICLE-DU)
 f. **Invited to the studio was** - of course - an expert at the case. (ICLE-DU)
 g. **Problematic, though, is** the fact that <*> (WUCLE)

On the basis of the distinctions discussed above, the assumption that these structures are the result of transfer from the L1 seems straightforward. However, it should be obvious that it cannot be the V2 constraint or verb movement per se which has been transferred to give rise to these patterns. Copula *be* has V2 distribution in English in any case. Rather, the difficulty is specific to the type of fronted constituent. This raises the possibility that what is transferred is an L1 information structural preference rather than syntax. As discussed in Ch. 3, Bohnacker & Rosen (2007a, b) have shown that this is a persistent problem for advanced learners after they have mastered syntax. So while these examples might plausibly be transferred from German or Dutch, it is not verb second itself which is transferring.

Of course, this analysis that information structure has been transferred is predicated on the fact that these examples represent transfer of *something*. A comparison between the V2-L1 corpora and non-V2-L1 corpora might call this into question as similar structures recur in ICLE-BU and ICLE-FI (8.34).

- (8.34) a. **Vain, then has been** that ambition for money and power. (ICLE-BU)
 b. **Interesting is** the common desire to be Bachelor or Master of Something. (ICLE-BU)
 c. **No matter how advanced is** technology today, there are things it cannot explain properly. (ICLE-BU)
 d. **Essential is** naturally the moving picture combined with sound. (ICLE-FI)
 e. **Somewhat new was** the presence of women as well. (ICLE-FI)
 f. **Comfortable, but also necessary is** the private motor-car for those who have a mobile profession. (ICLE-FI)

It is therefore possible that the occurrence of similar patterns in different L1 subcorpora reflects a difficulty common to all learners acquiring English as an L2. The nature of the

input might induce all learners irrespective of their L1 to overgeneralise a V2 pattern where it is not warranted. This is especially relevant as the nature of V2 with *be* in English in these cases poses a significant learning problem. It is not possible on the basis of positive evidence in the input to acquire the pattern whereby fronted bare adjectives are not grammatical in English. There is ample evidence that *be* and its subject must invert when a complement is fronted, however negative evidence would be required to establish that only a specific subset of adjectival complements can be fronted.

We could therefore posit an interaction between the nature of the English input and the role of surface transfer from the L1 in giving rise to these structures, even though the underlying syntactic representation might be different for the different L1 groups. It is therefore likely that, for the German and Dutch speakers, these instances involve transfer reinforced by evidence from the input. When they encounter structures of the form *More interesting is the fact that...*, learners may only notice (in the technical sense) that this involves fronting an AdjP and not notice that only comparative AdjPs may be fronted. They can therefore assume that the relevant properties of copula inversion are more or less identical in English and in the L1. As a result, they will produce patterns in English which are identical to L1 structures safe in the misguided belief that this must be correct as English is the same as the L1 in the relevant respects. This sort of analysis predicts that this sort of structure will persist at the most advanced levels of acquisition as it involves the discourse-pragmatics interface, and because there is positive evidence in the input that AdjPs may be fronted, but one would require negative evidence to retreat from the assumption that these structures are possible⁴¹.

8.5 Thematic Verb Movement

The placement of adverbs and sentential negation relative to thematic verbs are informative about the transfer of V2 as their occurrence to the right of thematic verbs, especially intervening between a verb and its object is indicative of the verb having raised. However, it has already been suggested that we should view V2 as to some

⁴¹ Such negative evidence is obviously not available in the input, as discussed, but is likely also not available in grammar instruction, I am not aware of these sorts of factors with regard to copula inversion being given specific attention in language classrooms.

extent divorced from lexical verb movement, and that a V2 constraint might be part of an L1 German speaker's L2 English grammar, even though the target setting for the lack of thematic verb movement has already been adopted. Similarly, it has been claimed by Westergaard (2003: 97) that L1 Norwegian learners of L2 English seem to continue to allow thematic verb raising to T after having apparently established that C is not a possible target for movement. We consider in what follows, therefore, whether the results might be in line with either the transfer of V2 or the continued possibility of thematic verb movement to functional structure lower than C.

8.5.1 Sentential Negation

As a function of the overall production of sentential negation, only a small fraction of negation structures diverge from target English syntax in each of the learner corpora. Table 8.13 below gives the patterns of auxiliary verb placement in relation to sentential negation in each of the learner corpora, the tag sequences representing the linear orders are also given for each of the negation structures.⁴²

⁴² Note that sequences of Subj-Aux-Neg-V, while indicating a lack of thematic verb movement, are ambiguous with respect to V2, as the auxiliary may be in C or T here. Given the restricted transfer of V2 with auxiliaries in inversion contexts, it is assumed here that a target-like representation underlies Subj-Aux-Neg-V.

Negation Structure (tag sequence)	ICLE-BU	ICLE-FI	ICLE-FR	ICLE-DU	ICLE-GE	WUCLE
Do/did not (VD* XX)	594	643	570	764	807	197
Have not + (verb) (VH* XX (V*))	89 (101)	74 (89)	44 (65)	71 (91)	65 (91)	17 (24)
Be + not (VB* XX)	624	534	507	658	626	250
Modal Aux + not (VM XX)	610	523	512	572	654	123
TOTAL	2018	1863	1698	2156	2243	431

Table 8.13: Negation Patterns in Learner Corpora

The occurrence of apparent verb raising in the form of V_{LEX}-Neg sequences is illustrated in Table 8.14.

	ICLE-BU	ICLE-FI	ICLE-FR	ICLE-DU	ICLE-GE	WUCLE
VLEX-Neg VV* XX	9	0	10	3	9	1

Table 8.14: Occurrences of Post-Thematic Verb Negation

However, an examination of the patterns which are identified by the tag sequences reveals that explanations other than a verb-raising operation are more probable. It is striking that a significant proportion of the verbs in these sequences are also the homophonous thematic equivalents of auxiliary verbs and this is common to all the L1 groups. In ICLE-GE the thematic versions of *have*, *do* and the modal auxiliaries account for 30% of the occurrences of VLEX-Neg sequences, 30% in ICLE-BU, 80% in ICLE-FR, 100% in ICLE-DU and WUCLE. As with questions, this is perhaps a result of

overlaying the syntactic behaviour of auxiliaries onto the representation of the lexical items *have*, *do*, *need*, etc. when they are used as thematic verbs. The vast majority of instances (n= 16 of 18, 88%) of this thematic/auxiliary confusion is accounted for by occurrences of *have*-raising. Again, *have*-raising is acceptable in certain English varieties and its production (or perhaps overproduction by the learners) is therefore better analysed as overgeneralisation of an English pattern.

- (8.35) a. They would not live only a little bit worse if they **had not** these things. (ICLE-GE)
 b. He took on a black jacket, and I was wondering that it **had not** stripes and no numbers on it. (ICLE-GE)
 c. The issuer is not the entity of the underlying equity security and the structured note **has not** the goal to raise additional equity capital.. (WUCLE)

The other occurrences of V_{LEX} -Neg succumb to analyses which likewise do not require invoking either verb movement or V2. Of the V2-L1 learners, only those in ICLE-GE produce V_{LEX} -Neg where the verb is not a thematic equivalent of auxiliaries. Of these six further examples of thematic verbs occurring pre-negation, one is formulaic as in (8.36).

- (8.36) **I think not** as there are too many different backgrounds, languages, traditions and religious beliefs. (ICLE-GE)

The other examples seem to be indicative of problems with the scope of negation, where the negator takes narrow scope over a particular constituent rather than functioning as sentential negation (8.37).

- (8.37) a. **Alice Walker leaves not doubt** that black people's traditions are different from that of their fellow white citizens.
 b. To conclude, crime seems to be state supported and justice **takes not its course any longer**.
 c. But these reasons **go not to the heart of the matter**.
 d. He seems **not the only one** to have recognised this.
 e. Do you know that your daughter **came not home until four o'clock** in the morning.

This phenomenon in itself may be the result of transfer as German realises in addition to sentential negation with *nicht*, constituent negation with the negative determiner *kein*. For some learners, then, not may also function as a constituent negator along the lines of

kein. It may also be that this pattern is more reflective of general problems with the scope of negation in English. The examples of V_{LEX} -Neg in the L1 Bulgarian corpus are informative in this respect. In the examples which follow (8.38), bracketing indicates where the reading of the scope of the negator seems to be intended.

- (8.38) a. Goods are made [not to last forever].
b. People nowadays read [not less] than they did in the past
c. TV, for example, encourages [not thinking] by keeping people glued to the set, offering them beautiful images and ready-made ideas.
d. These both are indangered [not by science, technology and industrialisation].

In example (8.36b), replacing *not* with *no* makes the token acceptable where the negation has narrow scope. The remaining occurrences of V_{LEX} -Neg, from ICLE-FR, which do not involve have are also apparently due to a scope problem rather than verb movement. This squares with the results from studies of the transfer of verb movement from L1 French into L2 English, where it is found that even though L1 French learners produce VAO order in English, they do not raise verbs over negation (White 1992). Thus instances where a lexical verb precedes negation seem to be due to allowing *not* to take narrow scope over a particular category, rather than moving the verb over sentential negation.

8.5.2 Verb-Adverb-Object Order

The results so far have suggested that there is only a very restricted occurrence of transfer of V2 structures in the production of the V2-L1 learners and that this is confined in the main to the raising of auxiliary verbs and copula *be* in declarative clauses. There are independent and preferable analyses for the occurrence of non-target linear orders in the other diagnostics, which might on the surface be taken to be V2 transfer. The results for VAO order at first seem to contradict these findings and suggest that there is in fact more extensive transfer of V2, or at least thematic verb raising to some functional projection above VP, in the form of raising of lexical verbs past sentence-medial adverbs. The relevant data is outlined below. The analysis of this data, however, will suggest that this is also not representative of the transfer of V2 and that adverb data is ultimately not necessarily a robust diagnostic for verb movement.

Theoretical Considerations

Following standard assumptions in the SLA literature (cf. White 1992), it has been assumed until now that VAO order is indicative of the transfer of verb movement. As discussed in the Introduction, reams of papers have reported on VAO data in SLA on the assumption that this represents transfer of V-to-I raising, especially in the L1 French-L2 English pairing. However, the status of adverb placement as a diagnostic for movement has been called into question from a theoretical point of view. Chomsky (1995: 330-331) points out that adverb distribution cannot necessarily be used to establish whether other clausal constituents have moved. For example, an adverb may intervene between an N head and its complement in English even though there is no N-raising in English, for example in “John made a decision (last night/suddenly) to leave town.” Thus the reason for the ungrammaticality of VAO would seem to require a different explanation, perhaps due to an adjacency requirement between the verb and its object. Delfitto (2005: 104) sums up this line of thought when he claims: “... let us emphasise that the use of facts of adverb placement as a diagnostic for syntactic operations affecting constituents other than adverbs ... is arguably more problematic than it is generally assumed.”

From an acquisition point of view, Lightfoot & Hornstein (1994: 10-11) similarly claim that the acquisition of the verb movement properties of an L1 on the basis of adverb distribution is problematic. They propose that it is implausible that children must first acquire the details of adverb syntax as the basis for setting verb movement. Adverb placement is often variable and governed by scope and discourse-pragmatic properties. The fact that L1A research has shown that verb movement properties are acquired early in an L1 shows that the acquisition of this operation is most likely independent of adverb placement and that adverbs are “much less robust than interrogatives and negatives in a child’s experience” (Lightfoot & Hornstein 1994: 10). Recall also that Westergaard (2003: 98) proposes that the necessary input cue to (re)set verb movement over adverbs would actually be questions and negation rather than adverb placement itself, as adverbials can appear in a number of linear positions in the clause. Against this theoretical backdrop, evidence from the corpora suggests that while adverb placement remains variable and non-target-like in many instances, this is not best analysed as the result of verb movement. We would thus expect to find adverb placement to be

persistently variable and not just confined to instances where it can be analysed as movement of thematic verbs past the adverb. It will be shown that this prediction is confirmed as there are a number of linear orders where adverbs are misplaced but which cannot be captured by a verb movement analysis, for example where verbs are non-finite (see below).

Linear VAO Orders in ICLE

Similar VAO patterns with apparent movement of finite thematic verbs recur in all the learner subcorpora (n=6 in ICLE-BU, 2 ICLE-DU, 15 ICLE-FI, 19 ICLE-FR, 17 ICLE-GE, 5 WUCLE). This is somewhat surprising for the V2-L1 learners in the context of the results for inversion and other movement diagnostics. Recall that it has been suggested that there is no evidence for the movement of thematic verbs in inversion contexts, in questions or over sentential negation. This asymmetry is unexplained on the assumption that adverb placement, sentential negation and verb placement in questions are all equally valid diagnostics for thematic verb movement. Similarly, the evidence from inversion in declaratives has shown that those German and Dutch speakers who retain a residual V2 constraint in their L2 English realise this with inversion of auxiliaries and copula *be* after fronted constituents, if they also allow thematic to raise, it is unclear why there is no evidence of these in inversion contexts.

The quantitative asymmetry between auxiliary- and *be*-inversion as an instance of V2 transfer and the occurrence of VAO is particularly striking in ICLE-GE. There are 20 instances of inversion of auxiliaries and copula *be* which are apparently the result of transfer. In order to contextualise this, it can be estimated that there are at least 4600 sentences beginning with a non-subject XP in ICLE-GE. This is based on extrapolation from counts of sentence-initial constituents in a random sample of four batches of 100 sentences extracted from the corpus.⁴³ On average 43% of sentences started with a non-subject XP, and the corpus contained 10,926 sentences. Inversion as a result of V2 transfer therefore occurs in less than 1% of possible contexts (0.43%). By contrast, the 17 instances of adverbs intervening between finite lexical verbs and their objects account for 3% of all occurrences of adverbs preceding main lexical verbs (n=463 Adv-

⁴³ Counting of sentences and extraction carried out using sentence splitter 'SentParBreaker'
http://text0.mib.man.ac.uk:8080/scottpio/sent_detector

$V_{\text{LEX,FIN}}$)⁴⁴, see representative examples in (8.39). This is rather surprising in the context of overall results for inversion.

- (8.39) a. At 6.30 I arrived in Mark's prison cell accompanied by a warder who **closed immediately** the door behind us. (ICLE-GE)
b. Another man **saved always** a part of his earnings in order to be able to fulfill his most cherished dream. (ICLE-GE)

A different asymmetry emerges from the ICLE-DU data. Even though a minority of the L1 Dutch learners seem to have retained a residual V2 constraint, there are only two examples of an adverb intervening between a finite lexical verb and its object. The logical conclusion to draw from the German and Dutch sets of data is therefore that inversion and adverb placement cannot both be taken to be representative of the transfer of a single syntactic constraint. A verb movement analysis for the VAO sequences in ICLE-GE, ICLE-DU and WUCLE could be saved by arguing, as Westergaard (2003) has done that while V2-L1 learners can quickly reset the lack of thematic verb movement to C in L2 English, they may continue to allow thematic verbs to raise out of VP to I. Such an analysis chimes well with the interface hypothesis, which would assume thematic verb movement to I and V2 to be unrelated in L2A. However, an interface approach would predict precisely the opposite state of affairs with regard to inversion and VAO, i.e. that inversion, related as it is to information structure, might be likely to continue while lexical verb raising to I for narrow syntactic reasons of agreement and tense checking would be lost relatively more quickly.

A number of other factors renders a V-to-I analysis implausible. The fact that many of the occurrences of VAO in the data are with non-finite verbs finds no natural explanation on a raising analysis as non-finite verbs do not raise in German and Dutch. In addition, however, the asymmetry between the occurrence of auxiliaries and *be* in inversion contexts and the occurrence of thematic verbs in VAO contexts would be unexplained on the basis of a movement account for VAO. If the learners in principle allow thematic verbs to raise out of VP and at the same time retain a residual V2 constraint, it is not clear why thematic verbs do not occur in inversion contexts. If the thematic verb could raise to I, then there is no principled constraint that would then

⁴⁴ This is based on tag searches for adverbs preceding finite thematic verbs. The tag sequence is RR VVZ.

prevent further movement to C. As noted above, the fact that the V2-L1 learners optionally employ *do*-insertion to maintain V2 order in some contexts and so seem to have fully acquired the lack of verb movement. Taken together with the more general theoretical problems with the reliability of adverb placement as a diagnostic for verb movement and the fact that adverb placement is not apparently a robust cue in the input for the setting of a verb movement parameter, it is unlikely that the VAO occurrences in ICLE are representative of verb movement at all.⁴⁵

An analysis which can account for the adverb data in a principled fashion without implicating movement is therefore required and just such an analysis has already been proposed and in fact finds more support from the wider VAO data in ICLE. As outlined in Ch. 3, Chu & Schwartz (2005) have argued that the production of VAO sequences in L2 English by L1 Chinese speakers can be best explained as a reflex of the nature of the input, which I would suggest can be extended to the V2-L1 learners in ICLE. Chinese is also a non-raising language and so transfer of a verb movement operation is not possible. Similar to the Hornstein & Lightfoot observation for the role of adverbs in L1A, Chu & Schwartz (2005: 83) propose that the “irregularity of the input” in terms of adverb placement gives rise to problems for learners with Chinese as their L1. The fact that English adverbs may occur in a range of surface positions might be misleading for learners and make them unsure about adverb placement in general. Adverbs may surface in various positions relative to the thematic verb, including immediately to their right, when there is no direct object, and this could be misinterpreted by learners and lead them to allow adverbs to occur in a range of positions independently of whether they might or might not retain a verb movement operation from their L1.⁴⁶ As adverb placement relative to the verb in English is regulated by semantic, scope and discourse factors, these interface factors might themselves pose problems for learners. This thus accords with an interface explanation for variability in advanced L2 learners’ production, but the relevant interfaces govern adverb placement, rather than invoking a verb movement mechanism.

⁴⁵ The fact that this includes ICLE-FR might be seen as somewhat controversial given the extent of previous research on L1 French-L2 English which is predicated on the use of adverb placement as a diagnostic for verb movement. I do not claim that this is invalid but it would seem that the variability of adverb placement in English (or for that matter any other target L2) should perhaps be given more attention rather than assuming straightforwardly that VAO is the result of verb raising.

Finiteness and VAO

Further evidence that VAO does not reflect verb movement comes from the data which shows that, in addition to VAO sequences with finite thematic verbs, there are a similar number of instances where some non-finite form of a thematic verb occurs in VAO sequences. Where the verb is a non-finite form there is no motivation for movement, at least by L1 German and Dutch speakers.⁴⁷

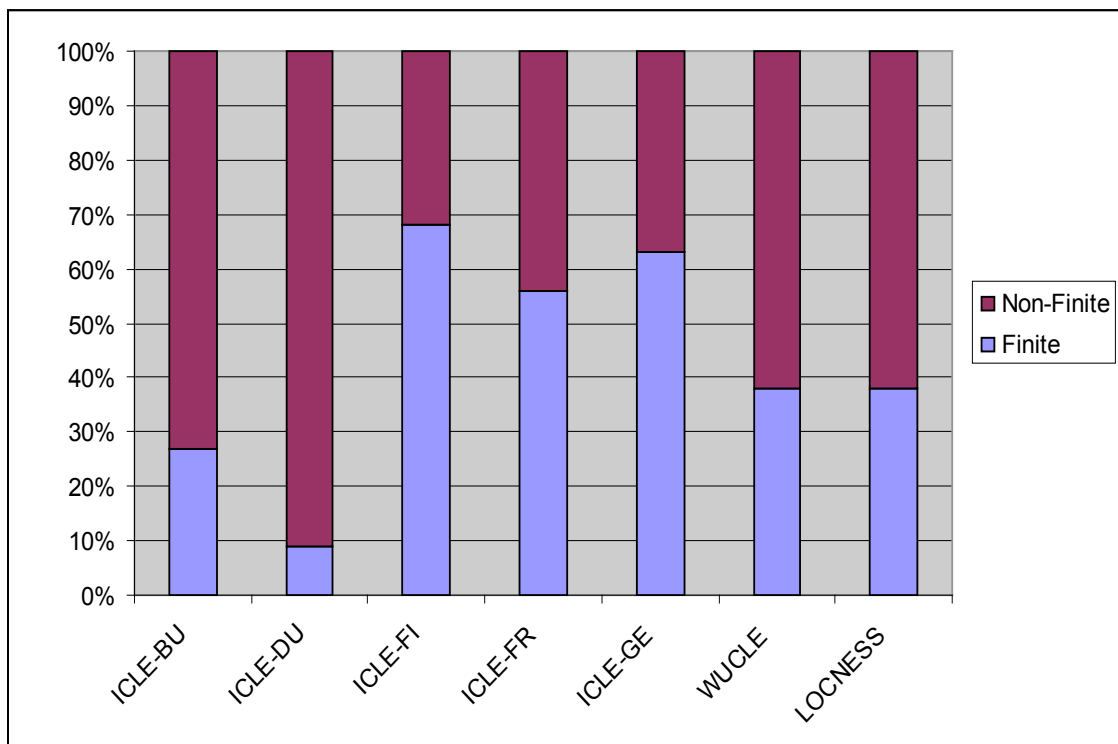


Figure 8.7: Percentages of finite/non-finite V in VAO

This pattern is particularly striking in the Bulgarian and Dutch L1 subcorpora, where the number of instances with non-finite verb forms far outnumbers the occurrences with apparently raised finite thematic verbs, see (8.40) and (8.41)

- (8.40) a. In her egoism she is unable **to see objectively** where she is wrong.
b. It is important to make sure that all people remain **to have equally** access to all communication techniques.
c. People today go on trying to find new solutions for new problems, **using**

⁴⁷ The other L1s under consideration may allow movement of non-finite forms. I do not pursue any further whether transfer may be at work here. The relevant point is that the V2-L1ers cannot have transferred a verb movement operation in these instances.

as well all of their imagination. (ICLE-DU)

- (8.41) a. Can we **use often** our imagination as in the dawn of humanity?
b. Imagination is a faculty, thanks to which, we are able to **solve differently and more creatively** the apparent problems.
c. The Civil war in U.S. didn't **bring immediately** the freedom to black people. (ICLE-BU)

Similar patterns are to be found in the German L1 corpus. In addition to the 17 instances of V_{LEX/FIN}-Adv-Obj, there are a further 9 examples where an adverb intervenes between a non-finite verb form and its object as in (8.42).

- (8.42) a. From one moment to another the silent crowd is turning to an exploding and errupting vulcano **applauding frenetically the runner**.
b. But one has **to take sensitively care** that nobody is hurt thereby! (ICLE-GE)

This provides further support for the analysis which sees VAO order in L2 English as a problem of adverb placement unrelated to thematic verb movement.

Adverb Type

There is no discernible pattern with regard to the type of adverb which may occur in VAO sequences in any of the learner corpora (see Table 8.15). This is additional evidence that linear VAO order is indicative of a problem with adverb placement rather than verb movement as the learners allow a range of adverb types to intervene between a verb and its object, not just adverbs which would normally occur in immediate preverbal position and might therefore plausibly be used as a diagnostic for verb movement.

Adverb Type	ICLE-GE	ICLE-BU	ICLE-DU	ICLE-FI	ICLE-FR
Additive	1	0	1	0	0
Aspectual	5	4	0	10	2
Degree	3	4	2	1	7
Domain	0	0	0	0	1
Frequency	5	1	1	0	0
Manner	7	9	2	7	17
Modal	2	1	1	1	0
Negative	0	2	0	0	1
Stance	1	0	0	0	1
Temporal	4	1	2	3	5
Total	27	22	11	22	35

Table 8.15: Types of Adverbs in VAO sequences

In a number of VAO sequences, the adverb would more naturally occur in clause-final positions, or at least after the verb and its complements. These tokens yet again point in the direction of a problem with adverb placement rather than an issue with verb placement. In ICLE-GE 30% of adverbs in VAO sequences would more naturally occur after verbal complements (8.43).⁴⁸

- (8.43) a. 10000 athletes and even more functionaries **entered colorfully dressed** the Olympic Stadium of Barcelona.
b. You're going **to master more easily** embarrassing and unusual situations.

In terms of syntactic representations, it might be suggested that the learners allow adverbs to attach to a range of syntactic nodes as they are unaware of the appropriate semantic and scope relations that should be in place to allow felicitous interpretation of

⁴⁸ Establishing whether adverbs should be pre- or post-verbal presents methodological problems as many adverbs are felicitous in either position with a change in meaning or a change in scope. For this reason, this is not pursued in detail or for the other learner groups. A wider study of adverb placement would doubtless find that adverbs appear in a number of infelicitous positions in the clause, not just with respect to the thematic verb.

different adverbs in different structural positions. Note also that many examples are not necessarily completely unacceptable in English and are approximations of felicitous native structures, even where the objects are not phonologically heavy. The examples in (8.44) from LOCNESS illustrate similar structures which are produced by native speakers.

- (8.44) a. This **illustrates emphatically** the folly of l'optimisme.
 b. They do this by **stating strongly** the constitutional amendment of church and state.

Heavy Object Shift

To take into account the possible role of heavy object shift in the production of VAO order, the average weights of objects (in number of words) were computed. Compare the weights of objects between the learners and natives in Table 8.16.

	ICLE-BU	ICLE-FI	ICLE-FR	ICLE-DU	ICLE-GE	WUCLE	LOC-NESS
Average Object Weight	5.5	6.3	6.6	6	4.3	5.2	7.9

Table 8.16: The Weight of Objects in VAO

When adverbs intervene between verbs and their objects, the objects are on average heavier in the native corpus. This might be indicative of the fact that the natives are producing HNPS while the learner utterances are qualitatively different. However, weight is not a discrete phenomenon and there can be no cut off point where one might say that an object becomes 'heavy' and as can be seen from the LOCNESS examples above, not all VAO structures produced by the natives could plausibly be seen as heavy shift. It would seem that there are a wide range of pragmatic, semantic and processing factors which regulate adverb placement and it would not be possible on the basis of the corpus evidence to isolate any single one as being of particular importance relative to the others. Nevertheless, given the empirical facts and the theoretical considerations already outlined, it seems unlikely that verb movement is what underlies VAO order, at least for the learners with a V2-L1.

8.6 Summary

In terms of the hypotheses formulated in Section 5.4, several trends emerge from the corpus results reported here. Firstly, as predicted by the Interface Hypothesis, all learner groups seem to have acquired the narrow syntactic nature of thematic verb placement in English, i.e. they realise that English is [-Agr] and does not permit thematic verbs to raise out of VP over negation and in questions. It has been argued that although there is ample evidence of VAO sequences, this is not a robust diagnostic for V2 or thematic verb movement. For empirical and theoretical reasons, a preferable analysis sees VAO word order as a more general problem with adverb placement rather than linked to verb movement. This sort of analysis can in itself be accommodated by the Interface Hypothesis; as adverb distribution is regulated by semantic and discourse-pragmatic factors, it would be predicted to be persistently difficult for learners of L2 English.

However, there is evidence of continued transfer of V2 by the L1 German and Dutch speakers, who produce instances of V2 which are distinct from other L1 groups and do not conform to target norms. This is exemplified by movement of auxiliaries, *do*-insertion and ungrammatical V2 patterns with copula *be* in declaratives. Thus the interfaces in terms of the syntactic consequences of topicalisation or XP-fronting seem to be more difficult for these learners than the narrow syntactic properties of thematic verb movement. This is particularly striking with the non-target copula *be* inversion tokens, where it is the nature of the topicalised element which gives rise to ungrammaticality rather than the V2 configuration itself. Further support for the nature of ‘syntax before discourse’ comes from target English stylistic. The syntactic constraints on the type of verb in full-verb inversion structures have on the whole been acquired, and for the V2-L1 speakers this is obviously treated as distinct from the sort of inversion in declaratives in the L1. However, there is continued variability in the realisation of the discourse-pragmatic constraints on full-verb inversion, i.e. on the status of the inverted subject and the initial constituents.

In terms of the ‘minor V2 parameters’ of English, the picture is more variable. The V2 distribution of copula *be* in English has been completely acquired, there is no evidence

whatsoever of treating be like other (V3) thematic verbs, although as alluded to above there is overgeneralisation of V2 patterns. SAI in questions is almost uniformly target-like, and where it is non-target, it can be accommodated by an analysis based on overextension or hypercorrection, i.e. applying *do*-support also to embedded interrogatives and subject-*wh*-questions. Negative inversion, by contrast remains more variable and is not completely acquired. It seems that the learners rely to a significant extent on the surface properties of negative XPs and produce more inversion with overt negators. This would suggest that micro-parametric options do not cluster as one would expect under the assumptions outlined in Chapter 3. Rather, L2 knowledge is built up in a piecemeal fashion based on surface properties of English together with mechanisms such as generalisation and categorisation.

This line of thought then has consequences for the predictions of global parameter resetting as in FT/FA. If we accept that micro-parameters are not reset but rather surface lexically specific phenomena are relied upon by learners, then it would also be expected that the same mechanisms are at work and that global parameter resetting is likewise not functioning. It is obviously the case that even though all learners ‘know’ and produce accurate [-Agr], [-V2] English, there is a continued residual transfer of V2 in certain contexts. This does not in itself falsify the global parameter resetting approach, as FT/FA admits that optional transfer might persist but that this should show evidence of underlying (though possibly non-target) parameter settings which can be formed by the learners on the basis of their L1 as the initial state interacting with UG and the input. We will pick up this issue again in Chapter 10, but for the time being we can note that it seems unlikely that there is a well-defined interlanguage parametric system which could produce both optional V2 and V3. In native English, where there are V2 options, this is tightly constrained by syntactic factors such as interrogative and negative operators, it is not obvious how a natural language system would allow for optional V2 inversion in declaratives independently of the type and function of fronted constituents.

9 Results: Grammaticality Judgement Task

This chapter presents the results of the grammaticality judgement task (GJT). The results of ANOVAs for between group comparisons and t-tests for within group comparisons carried out in SPSS 16 are reported. After a discussion of some preliminaries, each section deals with a different variable which it has been hypothesised will have an affect on the resetting of the German general V2 and verb movement parameters or the acquisition of English V2 properties.

The types of sentences which were judged are repeated here as (9.1) – (9.16) (the full list of test sentences is listed in Appendix 1). The task was designed to test whether there is a distinction between thematic verb movement and V2 and further, whether different types of V2 structure affected acceptability, i.e. depending on the type of fronted constituent. Recall that the Interface Hypothesis predicts that there should be a distinction between more target-like performance on thematic verb movement diagnostics compared to continued transfer of V2 inversion. As we have already seen in the corpus study, there is continued residual transfer of V2 but this is realised by *do*-insertion or auxiliary T-to-C movement. The judgement task permits a test of whether this is simply a production phenomenon and to test acceptability of V2 inversion structures with thematic verbs. Related to this, the prediction from Roeper's (1999) Universal Bilingualism proposal that V2 will be related to different lexical-semantic classes of verbs is tested, thus it would be expected that thematic verbs in non-target V2 structures would be more acceptable when the verbs have equative lexical semantics.

Knowledge of target English inversion and V2 patterns are tested on the basis of interrogative and negative inversion structures, which, on the basis of minor parameter setting models, should be consistent. Finally, knowledge of adverb placement is tested with sentences which reflect possible verb movement, target placement and 'other' ungrammatical placement, which does not reflect V2 or verb movement. This allows an analysis of whether VAO sequences are in fact indicative of syntactic transfer or whether adverb placement itself is problematic.

- (9.1) **V2TopAdvAux: inversion of auxiliary following a fronted adverbial.**
Generally do I expect economic conditions to improve.
- (9.2) **V2TopAdvLex: inversion of lexical verb following fronted adverbial.**
Last year rose the number of unemployed in Europe.
- (9.3) **V2TopArgAux: inversion of auxiliary following a fronted adverbial.**
The managing director congratulated his team, and especially the marketing manager did he praise.
- (9.4) **V2TopArgLex: inversion of lexical verb following fronted argument.**
An example of innovation offers the service sector.
- (9.5) **V3: target English word order following fronted element.**
In 1995 Austria became a member of the EU.
- (9.6) **SI: stylistic inversion.**
Out of the meetings emerged a new agreement on salaries.
- (9.7) **QTC: interrogative with T-to-C movement.**
Where did the meeting take place?
- (9.8) **QLex: interrogative with lexical verb movement.**
When begins the meeting with the clients?
- (9.9) **NITC: negative inversion with auxiliary T-to-C movement.**
Only at the last minute did we succeed in the negotiations.
- (9.10) **NIlex: lexical movement after fronted negative operator.**
Under no circumstances accept we the terms of this contract.
- (9.11) **NISitu: non-movement of lexical verb after fronted negative operator.**
Never I expected such a positive result.
- (9.12) **NegAux: sentential negation with auxiliary verbs or do-support.**
I haven't prepared my presentation
- (9.13) **NegLex: thematic verb raised over sentential negation.**
We accepted not the conclusions of the survey.
- (9.14) **AdvV3: target adverb placement.** Our plan would initially cost a lot.
- (9.15) **AdvV2: thematic verb raised over sentence medial adverb.**
I read often the Wall Street Journal.
- (9.16) **AdvOther: ungrammatical adverb placement not implicating V2.**
Our company awards contracts always to the lowest bidder.

9.1 Preliminaries

The descriptive statistics for the main structures relevant to V2 and verb movement diagnostics are summarised in Table 9.1 on the next page. The results here were used in computing further variables for more differentiated variables, which are presented in the remainder of the chapter.

This includes an undifferentiated summary of all test items; however one of the test items proved problematic for the subsequent analysis. This item (9.1) was designed to be an instance of ungrammatical V2 with auxiliary movement in a declarative.

- (9.17) Because of problems with delivery have we cancelled the contract.

However, fourteen native speakers judged the item as grammatical (7 ratings each of '1' and '2'). While both the learner group ($M = 3.35$, $SE = 0.74$) and the native speakers ($M = 3.00$, $SE = 1.09$) overall judged the item as ungrammatical, the natives judged it as relatively more acceptable and a paired T-test showed that the difference in the average judgements between the two groups approached significance $t(81) = -1.89$, $p = 0.06$. It is not clear why this should have been judged as significantly more grammatical by the native group. A plausible assumption is that the item is defective and did not tap the native speakers' reaction to ungrammatical V2. For this reason, it was disregarded in computing further variables.

Variable	N		Range		Min		Max		Mean		Std. Error		Std. Deviation	
	Natives	Learners	Natives	Learners	Natives	Learners	Natives	Learners	Natives	Learners	Natives	Learners	Natives	Learners
V2Front (9)	49	58	1.25	2.12	2.75	1.88	4.00	4.00	3.43	3.35	0.05	0.06	0.34	0.45
V3Front (5)	49	58	1.40	1.60	1.00	1.40	2.40	3.00	1.70	2.20	0.04	0.05	0.31	0.39
QLex (3)	49	58	1.67	2.00	2.33	2.00	4.00	4.00	3.55	3.43	0.06	0.07	0.42	0.53
QAux (3)	49	58	1.00	1.33	1.00	1.00	2.00	2.33	1.15	1.42	0.04	0.06	0.30	0.46
NegLex (2)	49	58	1.00	2.00	3.00	2.00	4.00	4.00	3.67	3.78	0.05	0.06	0.36	0.42
NegAux (2)	49	58	1.00	2.50	1.00	1.00	2.00	3.50	1.26	1.66	0.05	0.07	0.38	0.55
VAO (5)	49	58	1.80	2.20	2.20	1.80	4.00	4.00	3.19	3.05	0.06	0.06	0.44	0.48
V3Adv (12)	49	58	1.36	1.83	1.00	1.08	2.36	2.91	1.38	1.93	0.05	0.05	0.32	0.37

9.2 English V2 Properties

9.2.1 Stylistic Inversion

The results for the judgements of SI (9.6 above) indicate that the learners judge grammatical inversion in English to be significantly more unacceptable than the natives, $F(1, 83) = 39.72, p < .0001^a$. Unsurprisingly, the natives do not provide a categorical judgement on SI ($M = 2.20$), reflecting the fact that it is optional in English. Even though the SI token in the test was designed to be grammatical, the lack of a discourse context probably led to the native speakers to judge it as pragmatically infelicitous in some cases. The more categorical judgement of unacceptability on the part of the learners indicates that they are less willing than the native speakers to accept inversion and surface V2 patterns in English, even where this is licensed and grammatical.

However, in comparison to the ungrammatical inversion patterns in declaratives, where the verb is a transitive thematic verb, the learners are significantly more likely to accept stylistic inversion $t(56) = 25.75, p < .05$. So while the learners' judgement of SI is not determinate and diverges from the native judgements, it is still qualitatively different from their judgement of ungrammatical inversion patterns. Thus, at the group level, the learners appear to have acquired that V2 is licensed in English when the verb is unaccusative and a locative complement is fronted. However, there is a significant proportion of learners who consistently reject SI (20.7% rate it at the 'very bad' end of the scale), perhaps reflecting the fact that this is not part of the grammar for a significant segment of L1 German speaking learners of English. In addition, there may be a similar effect of the lack of a discourse context, so that even those learners who have knowledge of SI might reject it on the same grounds as some natives due to the fact that inversion in an isolated, out-of-the-blue context is pragmatically awkward.

An additional complicating factor is again the role of conscious knowledge of grammar derived from instruction. It is possible that the tendency to reject SI, as was suggested for the erratic production of NI in the corpora, is the result of the overgeneralisation of explicit taught knowledge of grammar whereby marked word order which is identical on the surface to German patterns may be rejected. This might be especially relevant in the case of the WU learners as they will have been taught in school that English has

(A)S(A)VO(A) word order, but unlike students of English linguistics and literature, will not have had later taught input on the nature of SI. In none of the teaching materials used in English courses at WU Vienna is there any consideration of stylistic or locative inversion. However, this only serves to indicate that the differences between the judgement of inversion of transitive thematic verbs and SI must be the result of tacit knowledge derived from the input of (at least some of) the factors which regulate SI in English. Thus, it seems a segment of the learner population has been able to generalise a target-like grammar for this V2 property. One might speculate that given quantitatively more, and qualitatively more varied, input, there is no reason to assume that this V2 parameter could not be acquired.

9.2.2 Negative Inversion

The same phenomenon as identified in the production data is again in evidence in the judgements of negative inversion.

- (9.18)
- a. Only at the last minute did we succeed in the negotiations.
 - b. Never have I been so busy.
 - c. Under no circumstances accept we the terms of this contract.
 - d. Never I expected such a positive result.

Grammatical NI with aux T-to-C is rated as marginally ungrammatical by the learners ($M = 2.84$) and, unsurprisingly, as grammatical by the natives ($M = 2.00$). The learners therefore again assume that this instantiation of V2 in English is ungrammatical, even where it is a syntactic requirement. Where a thematic verb is raised after fronting a negative operator, the learners and natives judge this to be equally unacceptable, $F(1, 104) = 0.02$, $p > .05$. Interestingly, even though the learners judge NI to be ungrammatical, they also judge V3 order with a fronted negative operator to be ungrammatical ($M = 3.16$). This is likely a result of the fact that a number of the learners seem to have knowledge of NI (24.1% provide mean grammatical judgements for NI tokens), while others apparently have not acquired NI and the group means therefore fail to show a definite preference. As a group, the learners as might be expected also find V3 with fronted negation as significantly more acceptable than the

native group, $F(1, 103) = 6.88, p < .05$. It would seem, therefore, that the learners have a more consistent preference for V3 over V2, even in cases where surface V2 patterns in English are an option or a requirement. The same reasoning as with SI applies also to NI. Given that aux T-to-C poses no problems for the learners in interrogatives, the apparent lack of knowledge of the structure with NI is no indication that the syntactic movement is itself *per se* rejected. Rather, once again, the paucity of evidence in the input and the fact that the structure tends not to receive explicit attention in English classrooms means that learners apply a more consistent V3 pattern across the board for English. Taken in tandem with the corpus results, which showed that V2-L1 learners are more likely to produce V3 with fronted negative operators suggests that this is likely to be the result of explicitly taught grammatical knowledge (refer again to Rothman 2008). The fact that comparative distinctions tend to be emphasised in ELT lessons means that V2-L1 learners perhaps monitor consciously for V2 word order, assuming that it is wrong in the absence of significant evidence (e.g. with questions) that it is grammatical.

In addition, as with the corpus results, there is a distinction in the acceptability of NI depending on the type of fronted constituent, i.e. overt negators versus restrictive adverbials or PPs. A paired sampled t-test comparing 9.18a to 9.18b showed that for the learners, NI after a restrictive is judged significantly more unacceptable than after an overt negative $t(51) = 3.46, p < .001$. This could plausibly be taken as support for a constructionist approach, where fronted negatives are established as the prototypical NI construction on the basis of surface generalisation before other instantiations of fronted negative operators.

Overall, however, it can be stated that there is no bar to putting in place the more differentiated V2 options/requirements in English. The production data in the corpora show that psychotypical effects and perhaps conscious grammatical knowledge might make it more difficult or cause delays in the acquisition of NI by L1 German speakers, but it is obviously not impossible. As is clear, a number of learners show target-like behaviour for these structures. However, there is no support for a minor parameter setting model as negative inversion properties do not cluster but seem to be put in place in a piecemeal fashion based on surface properties.

9.3 Thematic Verb Movement

Interrogatives are included here along with the results for thematic verb movement over negation and adverbs, as the judgement task tested in the main whether or not learners permitted lexical verbs to raise in questions. As will be obvious, the results for the judgements of interrogative structures serve to show that SAI in questions has been mastered by the learners as a further instantiation of residual V2 in English.

9.3.1 Interrogatives

The native group performed as expected in their judgement of thematic verb movement in interrogatives. The results of a paired-samples t-test reveal a significant difference between their acceptance of auxiliary T-to-C movement ($M = 1.15$, $SE = 0.04$) and structures with raised thematic verbs ($M = 3.55$, $SE = 0.06$), $t(48) = 35.17$, $p < .001$. Unsurprisingly, the natives judge these instances of verb movement to be ungrammatical. The learners also have a similar preference for QAux ($M = 1.42$, $SE = 0.06$) over QLex ($M = 3.43$, $SE = 0.07$), $t(57) = 23.24$, $p < .001$, showing that they have a target-like grammar for SAI in questions and they disallow thematic verb movement.

This suggests that the learners performed in a native-like way on the judgement of thematic verb movement. This is confirmed by the results of a one-way between-group ANOVA comparing the preferences of the natives and the learners. There was no significant difference between the mean judgements of the native and learner groups on instances of raised lexical verbs, $F(1, 105) = 1.61$, $p > .05$. There was, however, a significant difference between the mean judgements of the grammatical SAI structures with raised auxiliary verbs or expletive *do*-insertion, $F(1, 100) = 13.02^{49}$, $p < .001$. This, however, does not reflect a difference in terms of absolute judgements of grammaticality; both the learner and native groups accepted SAI as the grammatical option, but the learners were not as categorical in their judgements ($M = 1.42$ vs. 1.15).

⁴⁹ The assumption homogeneity of variance was violated, therefore the Welch *F*-ratio is reported. Where this is the case in subsequent tests, the statistic is marked with ^a.

In the light of the results of sentential negation reported below, it seems that the apparent distinction in acceptance of grammatical sentences reflects a general tendency on the part of the learners as a group to be less categorical in their judgements than the native speakers. Whatever the reason for this distinction, it does not affect the main finding that the learners behave like native speakers in their judgements of ungrammatical thematic verb movement in interrogatives, indicating that they have acquired the lack of thematic verb movement in English.

In terms of the V2 properties of English, the interrogative data again serves to show that there is no inherent problem for L1 German learners in acquiring the fact that English may have syntactic V2 requirements in certain contexts. Again, the seeming ease with which interrogative syntax is acquired in contrast to negative inversion is likely due to the fact that questions are more frequent and likely more salient in the input. In addition, clause-typing will likely play a role in facilitating the acquisition of V2 in questions as an ‘exception’ to the standard rule of V3 in declaratives. While the declarative word order apparently overrules the requirement for SAI after a negative operator.

9.3.2 Sentential Negation

The results for thematic verb movement in questions are mirrored by the results for the movement of thematic verbs in negation contexts (9.19).

(9.19) **NegAux** The union representative didn’t expect the negotiations to be so tough.
I haven’t prepared my presentation.

NegLex We have not problems with the new computer program.
We accepted not the conclusions of the survey.

The native group again performed as expected, with a categorical preference for pre-verbal sentential negation with auxiliary movement or *do*-insertion versus thematic verb movement over negation, NegAux (M = 1.26, SE = 0.55) versus NegLex (M = 3.67, SE = 0.52), $t(48) = (33.62)$, $p < .001$. The learners similarly show a significant preference for NegAux (M = 1.66, SE = 0.73) versus NegLex (M = 3.77, SE = 0.42), $t(56) = 25.75$, $p < .001$.

The patterning of the natives' preferences compared to the learners' followed the same pattern as identified for interrogative test sentences. Both groups showed similar preferences for NegAux over NegLex and there was no difference between learner and native group's judgements of thematic verb movement over negation, $F(1, 105) = 1.79$, $p > .05$. Once again, a significant difference between-group difference emerges in the mean judgement of grammatical sentences with auxiliary movement or do-insertion, $F(1, 104.96) = 1.83$, $p < .001^a$. The same explanation as suggested above applies here too. The overall pattern in terms of acceptance of grammatical negation structures and rejection of ungrammatical patterns reflects that the learners prefer non-movement of thematic verbs but they are not as categorical in their judgement of grammatical tokens (M: 1.26 vs 1.66).

In sum, then, the results from the negation and interrogative judgements show that the learners perform within the range of native speakers and therefore seem to have acquired the nature of V-in situ in English. This is interpreted as indicative of the learners having acquired the lack of thematic verb movement in English and would confirm the results from the corpus data. The parallels between the native and learner judgements of target and ungrammatical interrogative and negation structures are illustrated in Figure 9.1.

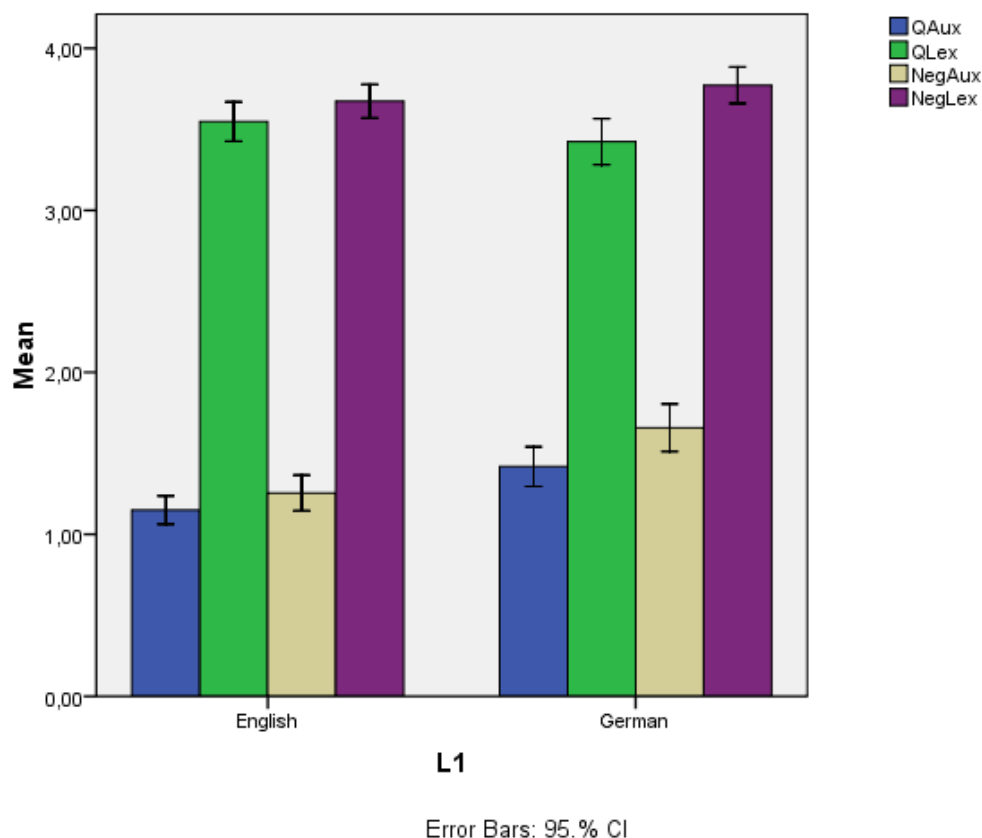


Figure 9.1: Acceptability of Verb Movement in Questions and Negation

9.3.3 Adverb Placement

In Chapter 8, we discussed theoretical explanations for why adverb placement is not necessarily a reliable diagnostic for verb movement. It was suggested that the nature of the input might lead learners to be unsure about the nature of adverb placement in English in general and therefore produce or accept VAO sequences as a result of allowing adverbs to occur in a number of surface positions without retaining a verb movement operation from the L1. In the judgement task, in addition to testing contexts amenable to a thematic verb movement analysis, other ungrammatical adverb placement was tested to judge whether or not the learners might have more general problems with the linear placement of adverbs not implicating verb movement (see examples in 9.20 and variables tested below).

(9.20) **VAO** We buy regularly office supplies online.

I read often the Wall Street Journal.

AdvOther In the internet business quickly things can change.

After some problems the new computer system is effectively working.

Interestingly, the results of the acceptability judgements of grammatical V3 (SAVO) and ungrammatical (SVAO) adverb placement follow a similar pattern to the comparative results for questions and negation. Thus, there were no significant between-group differences in the mean acceptability of VAO, which were judged equally unacceptable by both natives and learners, $F(1, 105) = 2.45, p > .05$. Once again, there was a significant difference between the natives' and learners' judgements of the acceptability of grammatical V3 SAVO orders, which were judged significantly less acceptable by the learner group, $F(1, 105) = 65.9, p < .001$. The same analysis applies as with negation and questions, whereby the learners still find SAVO acceptable but the mean judgement is not as categorical as the natives' (M 1.38 vs. 1.93). An initial hypothesis might then be that there is a similar effect here and that the acceptability of thematic verb movement is also at issue in the learners' judgements of VAO sequences. This would, however, contradict the proposal that VAO is not a reliable movement diagnostic.

Therefore, in order to test the Chu & Schwartz (2005) analysis, the mean judgements of QLex and NegLex were transformed into a single variable VMove for comparison to VAO and the mean judgements of sentences with anomalous adverb placement which cannot involve a verb movement operation ($n = 7$). This last variable we will call AdvOther. The results of this comparison should indicate whether verb movement affected the judgement of grammaticality. Recall that Chu & Schwartz suggested that VAO may be the result of general problems with adverb placement in L2 English as a result of the perceived irregularity of the input. I suggested this analysis could be applied to the VAO sequences in the learner corpora and assumed therefore that movement over sentential negation and in questions is a relatively more robust measure of the transfer of verb movement/verb second. The results of judgements of other

thematic verb movement sentences indicate that the learners mirrored the natives' intuitions regarding the acceptability of verb movement in questions and over sentential negation. Therefore, if the line of reasoning is correct and VAO reflects a more general problem with adverb placement, we could expect this to be judged significantly more acceptable than VMove by the learners and would further expect it to pattern with AdvOther, i.e. there should be no differentiation between adverb placement which might on the surface pattern like verb movement and other ungrammatical placement of adverbs. A one-way repeated-measures ANOVA compared VMove to AdvMove to AdvOther. There was a significant main effect of verb movement on the learners' judgements of grammaticality, $F(2, 114) = 70.07, p < .001$ and the effect size was large $r = 0.82$. Moreover, although all three variables were rated as relatively unacceptable (mean judgements, VMove = 3.60, VAO = 3.05, AdvOther = 3.03) each of VAO and AdvOther were judged significantly more acceptable than VMove ($p < .001$), while there was no significant difference in the mean acceptability of VAO and AdvOther ($p > .05$).

These results corroborate the hypothesis that the learners' judgements of VAO and other (more robust) verb movement diagnostics are qualitatively different. This supports an analysis which assumes that a thematic verb movement representation does not underlie VAO sequences in the L2 English of L1 German speakers, otherwise we would expect the learners to judge these as equally unacceptable as other movement diagnostics. It is, of course, possible that under a multiple parameter setting, the learners still allow thematic verb movement over adverbs while it is categorically ungrammatical in other contexts. However, the fact that they do not appear to differentiate between VAO and other ungrammatical linear adverb positions and that these are all judged relatively more acceptable than verb movement indicates that it is likely adverb placement which is more generally problematic in L2 English and more difficult to acquire. Added to the conclusions drawn from the interrogative and negative data, this indicates that the learners have acquired the lack of thematic verb movement in English in all contexts and the differences with regard to VAO are connected to adverb placement. Importantly, in terms of the theoretical predictions, different linear orders which are regulated by a single underlying parameter in German are no longer clustered

together in the L1. This could suggest a breakdown in the parameter setting system and that different linear orders are acquired in a piecemeal fashion in the L2.

9.4 V2 Transfer? Inversion in Declaratives

An interesting pattern emerges from comparisons of test sentences with fronting of constituents followed either by ungrammatical inversion (V2) or grammatical V3, exemplified by the sample test sentences in 9.21.

- (9.21) **V3Front** Recently the stock market has performed badly.
V2Front (aux) At the moment is the company expanding quickly.
V2Front (lex) Last year rose the number of unemployed in Europe.

There is no difference between the native and learner groups' judgements of V2 inversion in declaratives, indicating that, overall, the learners do not accept V2 in declaratives per se, $F(1, 105), p > .05$. There is, however, a significant difference in judgements of grammatical V3 after fronted constituents, $F(1, 105), p < .001$. This appears to follow the recurring pattern whereby the learners and natives pattern similarly with regard to ungrammatical sentences, while the significant differences in judgements of grammatical sentences are due to less categorical judgements on the part of the learners. However, it seems that the difference in judgments of grammatical V3 after fronted XPs is not simply due to a general tendency to give less categorical judgements, see Table 9.2.

	V3Front	NegAux	QAux	V3Adv
Natives	1.70	1.26	1.15	1.38
Learners	2.20	1.66	1.42	1.93

Table 9.2: Mean judgements of grammatical sentences

As can be seen, the highlighted value for the learners' judgement of V3Front is distinct as it actually approaches ungrammaticality. The question then is whether or not this might reflect a substantive finding in terms of the learners' knowledge of XP-fronting in English or whether this might reflect a reaction to some other factor in the test sentences. A repeated-measures analysis of all the grammatical sentences with XP fronting tested this ($n=5$). The results unfortunately do not permit a definitive answer.

One V3 sentence (Ex. 9.22) with a topicalised object is the only one to be judged ungrammatical ($M = 3.14$) and the judgements for this token are significantly different from the grammatical judgements of the other four sentences $F(1, 43) = 75.34, p < .0001$. The natives, however, provide the same sort of judgements and rate the sentence with a topicalised object as marginally ungrammatical ($M = 2.93$) and judgements for this are also significantly different from all other grammatical sentences with a fronted XP, $F(3, 132.9) = 74.14, p < .0001$.⁵⁰

(9.22) I am sure about the price - 1000€ we offered.

This need not indicate that there was some problem with this test sentence *per se*. Rather, it is likely that the reactions to the sentence reflect rather an intuition that the sentence was pragmatically infelicitous given that argument topicalisation is rare and restricted in English, and that, in addition, the individual sentences in the test did not have a wider context which might have provided a discourse motivation for topicalisation of an argument, despite the fact that the sentence was designed to provide enough context in itself. Where adverbials are fronted, these are more readily accepted by the learners and the native speakers alike.

9.4.1 Verb Type

So far the results of the grammaticality judgement task have been taken to be indicative of the fact that the WU learner group, in the same way as the other learner corpus participants, have mastered the lack of thematic verb movement in English as they do not accept sequences where thematic verbs raise in questions or over negation. Both the interrogative and the sentential negation datasets reported so far test the learners' knowledge of the lack of thematic verb movement in English. Neither dataset in fact has a direct bearing on V2 as all negation/interrogative test sentences are compatible with a surface V2 analysis, the differences lying in whether a thematic or auxiliary verb occurs in second position. Nevertheless, the fact that thematic verb movement is consistently rejected logically entails that the learners should likewise consistently reject V2

⁵⁰ Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(9) = 35.73, p < .05$. Multivariate tests were significant. The statistics report the corrected degrees of freedom using the Greenhouse-Geisser estimates of sphericity. Where this is the case in subsequent tests, the Greenhouse-Geisser estimates are reported and marked with ^b.

structures in declaratives which would involve the movement of thematic verbs as in X- V_{LEX} -S. As the corpus results established, they may, however, continue to have a residual V2 constraint which is realised by means other than thematic verb movement, i.e. aux T-to-C or *do*-insertion (see sample sentences in 9.23).

- (9.23) **V2Aux** At the moment is the company expanding quickly.
Generally do I expect economic conditions to improve.
- V2Lex** Last year rose the number of unemployed in Europe.
There were no profits in 2007, as a result fell the share price.

The results for comparisons between the natives and learners are, therefore, surprising in the context of the assumptions made about the auxiliary/thematic verb distinction in the production of V2, especially given the findings from the corpus data, which seemed to suggest that where learners retained a residual V2 constraint, this was exclusively realised by the movement of auxiliary verbs. V2 structures were consistently judged to be unacceptable by the learners and there was no significant difference in their judgements of ungrammatical V2 where this was realised by auxiliary and thematic inversion $t(57) = -1.56$, $p > .05$. Indeed, there was actually a marginal preference for the inversion of thematic verbs (M 3.30 vs 3.40).

A comparison of preferences for ungrammatical V2 in declaratives showed that V2 with auxiliary verbs was judged equally unacceptable by both the learner and native groups, $F(1, 105) = 0.01$, $p > .05$. Indeed, the mean judgements were identical (M = 3.40). However, when inversion involved movement of a thematic verb, the learners judged this to be significantly more acceptable than the natives, $F(1, 105) = 4.76$, $p < .05$. This is somewhat puzzling given the apparently robust results for interrogatives and sentential negation, which demonstrated that the learners seem to have definitively acquired the lack of thematic verb movement in English. Indeed, from a theoretical point of view, these datasets are contradictory; if the learners do not permit thematic verbs to raise out of VP to functional structure in the I-domain then it is not clear what mechanism would allow thematic verbs to raise higher to C.

The immediate question is whether one of the items with thematic verb inversion might have been defective and produced an unusual pattern of judgements. This was tested by repeated-measures ANOVAs with the three sentences with thematic verb inversion as factors. The results for each of the groups show that the learners judged the equative sentence in (9.24) to be significantly more grammatical than the other V2 sentences with thematic verb movement, $F(1.6, 92) = 21.8, p < .001^b$. No such pattern emerges for the native speakers, for whom all instances of thematic verb inversion were equally unacceptable, $F(1.8, 81.5) = 2.76, p > .05^b$.

(9.24) An example of innovation offers the service sector.

This is illustrated in Figure 9.2. ‘Copular’ here refers to the test item in (9.24) above and foreshadows the analysis of the equative class presented below, where it will be argued based on Roeper (1999) that the verb’s copula-type argument structure is an important factor in the learners’ judgements of apparent V2 with this type of verb.

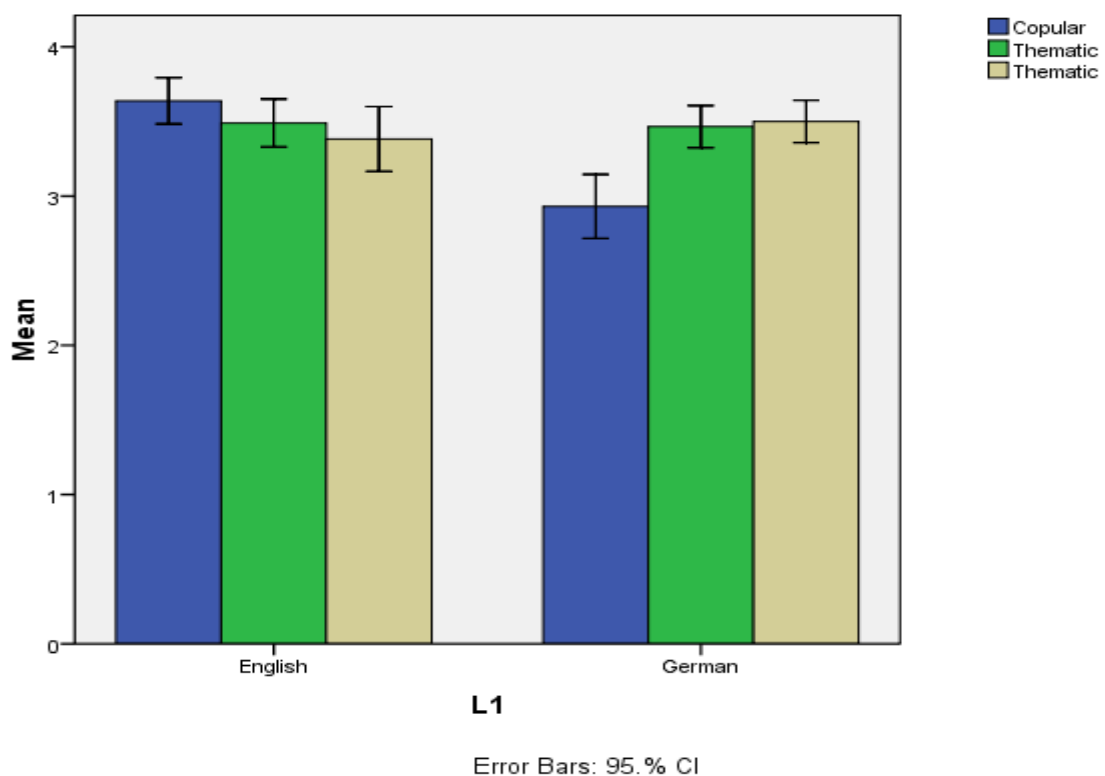


Figure 9.2: Mean Acceptability of ‘Copula’ Type Thematic Verb vs Other Thematic Verbs

Even after re-computing the V2Lex variable without the sentence in (9.2), the learners had no significant preference for V2 inversion with auxiliary verbs and both thematic verb inversion and auxiliary inversion were judged equally unacceptable, $t(57) = 1.35$, $p > .05$. In the context of the corpus results and the predictions made concerning the realisation of the transfer of V2, this constitutes a surprising result. It must be concluded that the learners who completed the grammaticality judgement task have definitely acquired the target English setting both for V-in situ *and* for the lack of a general verb second constraint, although they clearly have not as a group set all the English V2 properties to their target setting.

9.4.2 The Equative Semantic Class

To return to the instances of copula-like thematic verbs, it seems that the equative verbs in the test sentences skewed the overall results for inversion of lexical verbs. Here we consider these equatives in isolation to examine whether they give rise more consistently to V2 unlike other thematic verbs, as was predicted above. Recall again that the theoretical grounding for the assumption that there might be an effect of the semantic class of verb in the acquisition of V2 comes from Roeper (1999, 2007). Recall that he suggests that there is grammar competition in English between V2 and V3 and that this may be connected to the semantic classes of verbs, whereby verbs of saying and reporting and copula *be* give rise to V2 while other thematic verbs do not. Furthermore, in the course of first language acquisition of English, children may overgeneralise within semantic classes, producing ungrammatical V2 sentences such as “what means that?” (Roeper 1999: 175). So, V2 might be overextended to other lexical verbs in the copula or equative semantic class. Is it possible that L1 German learners of L2 English continue to transfer V2 with this class of semantic verbs, possibly because of overgeneralisation from *be*?

The instances of inversion of thematic verbs from the corpora indicate that it might be the case that learners in general irrespective of L1 produce ungrammatical inversion with this class of verbs (9.25). This might then indicate that the locus of the acquisition problem is with the realisation of the arguments of this type of verb rather than transfer of V2. Nevertheless, in these sentences, it is the case that the verbs in context cannot have a reading with an active agent subject and affected patient object. For example in

(9.25a) *offer* clearly does not have an active reading in the sense of *give* with an agent-theme-goal argument structure.

- (9.25) a. An example for this combination **offers** the German band Die Ärzte. (WUCLE)
b. What **implies** this? (ICLE-FR)
c. What **means** eternal, everlasting, rarefied and praiseworthy if not the deal or contract one has just made and that will set one beside the wealthiest persons? (ICLE-BU)

In the grammaticality judgement task, two test sentences contained instances of inversion around equative thematic verbs, one in a declarative, and one in an interrogative. Compare (9.26a) and (9.27a) to the other non-equative test sentences. ‘Equative’ here is used to mean a thematic verb which has a similar argument structure to the copula, i.e. without agentive subject-patient object, but rather that the verb serves in the main to link the two arguments, compare to the examples in (9.25).

- (9.26) a. An example of innovation offers the service sector.
b. Last year rose the number of unemployed in Europe.
c. There were no profits in 2007 and as a result fell the share price.
- (9.27) a. What implies the new tax law for our company?
b. When begins the meeting with the clients?
c. Approved the shareholders the plan?

The comparison of the learners’ acceptance of these sentences revealed a significant effect of the semantic type of the verb both in the declaratives $F(1.6, 21.8) = 21.08, p < .0001^b$ and the interrogatives $F(1.6, 84.9) = 20.48, p < .0001^b$. In both contexts the ungrammatical sentences with equative verbs were judged to be significantly more acceptable than each of the counterpart sentences with non-equative verbs, while these were both judged equally unacceptable. As a final test of the possible role of copula-type verbs, new variables were computed for comparison: V2Thematic (4 instances of V2 with ‘true’ thematic verbs in questions and declaratives), V2Equative (the two instances with a raised copula-type thematic verb). These were then used as factors together with V2Aux and V2Be (ungrammatical V2 with copula *be*) in a repeated-measures ANOVA, the results of pairwise comparisons of the learners’ judgements are presented in Table 9.4. The overall results again showed a significant effect of verb type, $F(1.25, 136) = 17.11, p < .0001$.

	Thematic Equative (2)	Full Thematic (4)	Auxiliary (4)	Copula be (1)
Thematic Equative (2)		sig.**	sig.**	not sig.
Full Thematic (4)	sig.**		not sig.	sig.*
Auxiliary (4)	sig.**	not sig.		not sig.
Copula be (1)	not sig.	sig.*	not sig.	

p.<.001*, p<.0001**

Table 9.4: Statistical Comparison of Learners' Judgement of Ungrammatical V2 by Verb Type

V2 structures with equative thematic verbs are judged significantly more acceptable than ungrammatical V2 sentences with full thematic verbs or auxiliaries, but they pattern similarly to judgements of ungrammatical inversion around copula *be*. The logical conclusion is that a certain class of thematic verb is more prone to transfer of L1 German word order patterns; however, it is not clear whether this is an underlying V2 operation. It is problematic to capture this from a parameter setting theoretical point of view. In the current Minimalist model, where movement is motivated by the need to check features, it would be mysterious for this to persist with a certain class of verbs as there is no causal link between the lexical-semantics of a verb and the requirement for it to raise to enter an appropriate syntactic configuration for feature checking. Again, a plausible analysis would then be that the different manifestations of an underlying syntactic operation no longer cluster in the L2 and so that L2A in this case proceeds in a piecemeal, constructionist fashion.

There was no effect of verb class on the native speakers' judgements. The sentences in (9.26) and (9.27) were all judged equally unacceptable. Overall, there was no significant difference between the natives' judgements of V2Equative and other ungrammatical V2 sentences, $t(48) = 2, p. > .05$.

At this stage it would be wise to enter a caveat. These results are based on a restricted dataset of only two test sentences with equatives. While the results are informative, they do no more perhaps than point to a possibly fruitful direction for further research. In

order to further test the assumption that V2 is more likely to transfer with verbs which belong to an equative semantic class, a supplementary study has been carried out with a different group of L1 (Austrian) German learners of L2 English with an intermediate level of proficiency (Rankin 2009). The results of this are reported in Chapter 10. This study set out specifically to test the differences in acceptability of ungrammatical inversion structures with a range of equative and non-equative verbs. Equative was operationalised as either intransitive verbs or transitive verbs which do not take an agent-patient argument structure, but rather have a similar structure as copula *be*, where the object is not affected by an animate agent subject. The results of this supplementary study reproduce the same results with inversion around equative verbs again judged more acceptable than other surface V2 patterns. This provides further corroboration for hypothesis that equatives will be more likely to give rise to V2 patterns. However, this is not necessarily taken to confirm Roeper's multiple grammars model, but rather to provide support for a constructionist approach to SLA. Refer to Ch. 10 for more detailed analysis.

9.4.3 Fronted XP

Previous findings (Hulk 1991; Westergaard 2003) that the type of fronted constituent, whether adverbial or argument, might affect the transfer of V2 might also indicate that there is no clustering of parametric options. This was tested on the basis of possible distinctions in the sort of sentences presented in (9.28); however, the results do not support either position, i.e. that adverbs or arguments are more likely to trigger V2 transfer.

(9.28) **V2Arg** An example of innovation offers the service sector.

The managing director congratulated his team, and especially the marketing manager did he praise.

V2Adv There were no profits in 2007, as a result fell the share price.

The campaign has been successful but unfortunately has it cost too much.

The results for acceptability of sentences depending on whether inversion followed a fronted adverbial or argument apparently indicate that the learners judged non-target V2 to be more acceptable with topicalisation of a fronted argument, $t(57) = -3.31$, $p < .005$.

However, it is possible that this might be unreliable given the finding that the semantic type of verb plays a significant role in the learners' acceptability of V2 structures. The one instance of a fronted argument with an equative thematic verb affected the judgements overall as there were only two instances of ungrammatical V2 with a fronted argument. It seems reasonable that if there is an effect of the type of fronted constituent on the acceptability of ungrammatical V2, this will interact in important ways with the type of verb, both in terms of the auxiliary/thematic distinction and the different semantic type of thematic verb.

A paired sample t-test of the judgements of ungrammatical $XP_{\text{ARG}}-V_{\text{AUX}}-S$ and $XP_{\text{ADV}}-V_{\text{AUX}}-S$ showed no significant differences in acceptability $t(56) = 0.41$, $p. >.05$. Given the conflicting prediction from Hulk (1991, arguments more likely to trigger V2 transfer) and Westergaard (2003, adverbials more likely to trigger), it is perhaps to be expected that there is no definite trend. It would seem that there is little empirical foundation to support an assertion that fronted adverbials or arguments will more consistently give rise to the transfer of V2. The syntactic realisation and discourse function of a fronted XP seem not to have any appreciable effect on the likelihood of V2 transfer.

9.5 Summary

The results of the grammaticality judgement task reinforce the finding from the corpus study that the lack of verb movement in English syntax has been mastered by the learners at this stage of proficiency. Thematic verb movement in questions and over sentential negation is rejected by the learners and their judgements of verb movement tokens paralleled those of the native speakers. Furthermore, the proposal that VAO order is evidence of a general problem with adverb placement in L2 rather than the result of the transfer of a verb movement operation finds empirical support. While the native speakers show no distinctions in their judgements of verb movement in questions, negation, VAO sequences and other ungrammatical adverb placement, the learners judge both VAO and other ungrammatical adverb placement to be significantly more acceptable than verb movement over negation and in questions, indicating that

adverb placement is itself a problem independent of verb second and verb movement.⁵¹ In terms of underlying structure, this can be captured by assuming that adverbs may be adjoined in a number of positions in the syntactic structure or placed in a number of possible specifier positions, which do not always establish the appropriate semantic and scope relations.

A more surprising result in the light of the corpus findings is that there is apparently no tendency for the learners to retain a V2 constraint. Unsurprisingly given the other V-raising results, the ungrammatical inversion of thematic verbs in declaratives is judged equally unacceptable by natives and learners. The inversion of auxiliary verbs in declaratives is similarly judged unacceptable by the learners. However, these group results obviously flatten out tendencies for individual learners to continue to accept and produce ungrammatical V2 patterns. Robertson & Sorace (1999: 328) similarly report that their acceptability judgement task produced no evidence for a V2 constraint at the group level for any of their proficiency levels, even at the lowest levels. They acknowledge that this is a somewhat surprising result on the assumption that the L1 parametric option transfers in its entirety at the initial state. The corpus results are informative in this regard as the qualitative distinctions between the native and V2-L1 learners are clear and there does appear to be a tendency for some learners to continue to show evidence of a residual V2 constraint. Given the rarity of this structure in the V2-L1 corpora, it is perhaps not entirely surprising that it is not in evidence in the smaller group of learners who completed the acceptability judgement task.

However, it was found that there was a significant effect of the lexical-semantics of verbs on the learners' acceptance of V2 to the extent that verbs in the equative semantic class with copula-like argument structure, are more likely to be judged as acceptable. This tentative result on the basis of a restricted amount of data calls out for further

⁵¹ I should emphasise that even though I have referred to verb movement throughout here, these results obviously only apply directly to the transfer of verb raising to C. Whether or not the same might apply to other learner groups whose L1s have only verb raising to I is an open question. It is in fact even possible that V2-L1 learners allow continued raising to I, i.e. an inclusive movement parameter setting in adverb contexts (see Westergaard 2003). The Chu / Schwartz analysis leads to the logical conclusion that adverb placement may be the root cause of at least a proportion of VAO by *all* learner groups. However, the role of transfer cannot be ruled out. It is likely that L1 transfer, for example in the French-English pairing would at the least reinforce a tendency to misplace adverbs between thematic verbs and their objects.

research. The results of a subsidiary study, which corroborate the findings presented here, are presented in Ch. 10.

The fact that surface V2 orders persist in the equative context and the fact that adverb placement is seemingly divorced from verb placement indicates that there is no continued global clustering of the surface manifestations of an underlying V2 parameter. This is interpreted as support for a constructionist, piecemeal mechanism of L2A. In order to lend this approach more conceptual support, it would be necessary to show that the L2 system cannot be described by a consistent parametric analysis. I suggest in the next chapter that it is fact that case that there is not a consistent underlying system and that parameter resetting is therefore not at work.

On the acquisition of English V2 patterns, there are indications that the learners as a group have not acquired English inversion and V2 patterns in declaratives. They tend to reject grammatical negative inversion and stylistic inversion. However, subject-auxiliary inversion in interrogatives is target-like. Again then there is no difficulty with the acceptance of V2 linear order in English, where this is an 'exception' to the normal V3 word order, i.e. in questions. In declaratives, the V3 rule of thumb, possibly derived from explicit knowledge of English word order, is applied more consistently. It emerges again from the judgement task that NI is influenced by the type of fronted negative operator. This provides further support for a non-parameter-setting approach as there is no clustering even within minor parameters. Rather, again, surface generalisation appears to be the source of the knowledge tested in the judgement task.

10 Discussion and Conclusions

10.1 Introduction

Let's review the learning task facing L1 German learners of L2 English and the nature of the corpus and grammaticality judgement results. Acquiring the nature of verb placement in English requires first of all that L1 German learners establish that Tense and Agreement features in English are weak and therefore do not motivate thematic verb movement out of VP. Additionally, they must move from a generalised V2 pattern motivated by the need to check illocutionary force features in the C-domain to a more differentiated English system whereby V2 is ungrammatical except in a restricted range of contexts where V2 patterns are either a syntactic requirement or a stylistic option.

The hypotheses outlined in Chapter 5 predicted in general that if there is parameter setting at work in L2A, global parameters should be set in a consistent, UG-defined way and/or that minor parameters will be set in a consistent fashion. Ranged against these predictions are those of a fundamental difference approach, whereby L2A is assumed to be piecemeal and proceed on the basis of item-based learning of specific constructions along with general mechanisms of generalisations and categorisation. In addition, regardless of the learning/acquisition mechanism, the Interface Hypothesis predicted that those aspects of linguistic knowledge which require integration of both grammatical and interface elements will prove more resistant to target-like performance and knowledge and than narrow syntactic elements.

The data from the corpora and judgement study suggest that it is relatively unproblematic for learners to reset the thematic verb movement properties to the English setting. However, the corpus evidence from WUCLE and ICLE-GE (and ICLE-DU) shows that the learners retain a residual V2 constraint which is instantiated by ungrammatical subject-auxiliary inversion after fronted XPs in declarative clauses and ungrammatical inversion around copula *be*. This expands on previous research which has found that there appears to be a dissociation between thematic verb placement and V2 in L2A (Hulk 1991) and that V2 transfer may persist at advanced stages in the

acquisition of L2 English by L1 German speakers (Robertson & Sorace 1999). The results from the learners who completed the grammaticality judgement task similarly show residual evidence of V2 but with different constructions. Even though judgement of ungrammatical subject-auxiliary inversion is target-like, learners still permit inversion around a particular lexical-semantic class of verbs.

It will be argued in what follows that this sort of evidence suggests that the learners seem to have made use of a range of cognitive processes in the learning of English distinct from the sort of implicit deductive acquisition of a first language by children. It is assumed that UG is available through the L1 and constrains the form of the grammar at a given point in L2 development. The residual non-target properties are best analysed in the first instance as the continued influence of the L1. Secondly, the continued non-target properties of the interlanguage seem to be the result of a constructionist or surface pattern-matching and associative learning mechanism in L2A. In addition, there is evidence of the influence of conscious grammatical knowledge derived from explicit learning and teaching. While some properties might indeed appear to show the deductive consequences of setting a parameter, for example interrogative syntax, there is evidence of continued reliance on specific surface patterns and the deductive consequences of setting a [-V2] grammar are not all in place. It will be proposed that a constructionist approach ultimately provides a more illuminating picture of the nature of the production and judgement data than a parameter setting model.

10.2 Global Parameter Resetting - Full Transfer/Full Access

If we assume that second language acquisition is driven by UG, it would be predicted that the surface manifestations of parametric options should cluster together as the underlying parameters are reset. This hypothesis also predicts that an interlanguage system will be an instantiation of a natural language parametric system, even if it is not the same as the target system.

It is clearly not the case for the L1 German speakers in the present study that parameters are completely reset consistently. However, a Full Transfer/Full Access approach can tolerate residual L1 optionality at advanced stages of L2A and predicts non-

convergence in certain areas. A succinct statement of the complicating role of the L1 is provided by Schwartz and Sprouse (1994: 356):

“...the lack of success may arise exactly because the sole hypotheses that an L2er can employ in the construction of an L2 grammar are those that UG makes available, but as they apply in conjunction with the L1 grammar, these hypotheses will in certain circumstances miss the mark and without (the necessary) negative data, the L2er will be unable to retract.”

As Schwartz & Sprouse observe, where the input evidence is variable and therefore not determinate enough to reset the L1 parameter setting, there may be continued apparent transfer of the L1 parametric option even at more advanced stages. ‘Apparent’ here refers to the fact that it is possible that on the basis of the input, a second language learner may not arrive at the target underlying representation, but could arrive at an alternative representation which accommodates the TL data. For example, the Schwartz & Sprouse (1994, 1996) analysis of the optionality in V2/V3 production by an L1 Turkish learner of L2 German as the consequence of the transfer of an adjunction operation from Turkish in combination with a possible natural language mechanism for checking nominative case. Can a similar line of reasoning account for the L1 German-L2 English data?

Let’s return to the simplifying assumption that the parametric differences between English and German are due to the fact that German is [+V2] and [+Agr] while English is [-V2] and [-Agr]. We then need to show that L1 German speakers acquiring L2 English may on the basis of the input arrive at a representation for English grammar which allows the sort of optionality in evidence in the corpus and judgement data.

With regard to thematic verb movement, it seems that the evidence for V-in situ is determinate and permits L1 German speakers to establish relatively quickly that the movement of thematic verbs in questions and over sentential negation is ungrammatical. The fact that the relative ordering of thematic verbs and adverbs remains variable can also be captured by Full Transfer/Full Access account. If it is assumed that the verb movement parameter has in fact been reset, the adverb placement facts can be captured by proposing a representation which does not include verb movement but which permits adverbs to adjoin to different nodes in the clause structure. The possibility of adjunction

to different sites will be permitted by UG and would capture the relevant facts of English adverb distribution. Once such a representation has been established there will be no relevant evidence to retreat from this; the same sort of analysis is proposed for adverb distribution in L1 French-L2 English interlanguage by Schwartz & Sprouse (1996: 59-60).

However, it is not clear that the same sorts of mechanisms can be applied to the inversion data. The proposal would be that the learners have a [-Agr], [+/-V2] grammar. This obviously does not violate UG constraints as native English could in fact be characterised in these terms. However, there are three empirical problems with this assumption. Firstly, for English the [+V2] properties are restricted to triggered inversion after fronted syntactic operators. For the learners, we must assume that the source of the complication is transfer from the German, so a general V2 requirement on the C head. From this assumption, it is in fact possible to point to difficulties with the nature of the input which might complicate the parameter resetting process. Any SVO surface sequence could be accommodated by the German V2 grammar. More pertinent perhaps, S-Aux-Neg-V-O might similarly reinforce a V2 grammar as it does not provide evidence against V2. This sort of structure, which is frequent in the input, could be generated by [+V2], [-Agr] grammar.

The evidence shows that the learners can resort to *do*-insertion to maintain a residual V2 constraint after fronted XPs. However, if an underlying [+V2] syntactic constraint must be fulfilled, it would be predicted that L1 German speakers would also produce non-emphatic *do*-insertion to satisfy this V2 constraint in a range of declarative structures as in Ex. (10.1).

- (10.1) a. Mary does like to read novels.
b. Mary does often read novels.

This is not attested in the data. There are indeed examples of the overuse of *do*-insertion without inversion in the corpora but this appears to be used to add emphasis even though it would not be target-like in similar contexts for native speakers (10.2), or it is overused with adverbials with negative force, possibly on analogy with *do*-support with

sentential negation (10.3). In addition, these patterns are common to all the learner groups and not just the V2-L1 learners so is unlikely to be due to the transfer of V2.

- (10.2) a. While this definition may capture aspects of the whole CSR idea, it **does however miss** out on some key areas. (WUCLE)
 b. I do really think that our “modern world” can be a source of inspiration and dreaming. (ICLE-FR)
 c. We **do still possess** optimism and belief in the common sense. (ICLE-BU)
- (10.3) a. Therefore, granting women (and man) time and funds to care may raise the birth rates and the female labour market participation, since paid work **does no longer compete** with family-starting decisions. (WUCLE)
 b. One reason is certainly that the protagonists of the dramas invented are known to everyone and **do never change**. (ICLE-GE)
 c. It is often asserted than in our modern world, the world of new technology, people **do no longer** dream. (ICLE-FR)

The second empirical problem is the presence of inversion around equative thematic verbs. On the assumption that this is due to transfer from German, the sort of representation that underlies it would be as in (10.4). However, it is not clear what motivates this sort of representation apart from surface generalisations. There is no principled explanation for why thematic verb movement should persist in this case given the assumptions of FT/FA. It might be argued that this sort of equative structure does not in fact have an underlying V2/verb movement representation but is connected to the realisation of the arguments of this particular class of verbs. Nevertheless, it seems clear that they are still due to transfer from the German and in the absence of an underlying V2 operation, one must again fall back on surface pattern generalisation (this analysis is developed below).

- (10.4) $CP[What_i C \text{ means}_j IP[this_k I t_j VP[t_k v t_j t_i]]]$

The third empirical problem is the nature of the evidence in the input which might motivate restructuring. Westergaard (2003) assumed that the word order cues in English are not robust enough to force a V2-L1 learner to retreat from a V2 grammar in a pedagogical setting. She proposes that object fronting would be a necessary cue for a V2-L1 learning acquiring English. As this structure is rare in the input, transfer of V2

would be likely to continue. However, as already outlined, it is not clear why object topicalisation in particular would be a necessary cue to reset V2 rather than the fronting of any constituent. XP-Subj-V is fairly frequent in the input and would surely motivate a V3 grammar. It might be posited again that fronting is accommodated by an alternative representation such as adjunction to CP together with continued head movement to C and subject raising to Spec-CP. However, the same problems as outlined above obtain; if the underlying representation involves movement to C, orders such as (XP)-Subj-Adv-V would be unpredicted. Of course, one might posit that the learners have acquired a V3/verb-in situ grammar on the basis of the input interacting with UG. However, the problem of the specific pattern of residual optionality of V2 arises again.

In addition, it is unlikely that the other V2 surface patterns in English continue to be a source of confusion for learners at more advanced stages. Interrogative syntax is target-like for the advanced learners and it seems clear this V2 property is treated as an exception to word order in declaratives. This finds support from the fact that negative inversion tends to be rejected as a violation of the V3 pattern in declaratives. Similarly, the distribution of copula *be* is consistently target-like to the extent that it never occurs in ungrammatical V3 patterns (if anything V2 is overgeneralised), therefore indicating that the syntax of *be* is successfully isolated from the 'normal' V3 rules and should not give rise to transfer in the form of auxiliary inversion.

In sum, under FT/FA, it remains unclear why the specific patterns of optionality should persist. While the nature of the input might not be straightforward in all contexts, the representation that this would motivate would not give rise to the specific residual V2 distribution, i.e. inversion of auxiliaries, copula *be* and equative thematic verbs.

10.3 Multiple and Microparameters

Implicit, deductive parameter-resetting in L2A is an implicit assumption in a multiple- or micro-parametric approach to SLA. As predicted by Ayoun (2005), multiple parameters should show evidence of partial clustering of the surface consequences of each of the individual minor parameters being set. The same observation should be in

evidence on the Split-Force microparametric account of V2 distribution. One could hypothesise that if L2 learners are sensitive to micro-cues, in the same way as proposed for children acquiring an L1 (Westergaard 2009a), this should simplify the learning task to some extent as they will only need specific micro-cues to reset micro-parametric options.

It is then an empirical question to establish exactly what the necessary frequency threshold would be for each micro-cue to set the V3/V2 properties of English. However it seems that the learners are only sensitive to global illocutionary force distinctions. They have consistent V2 in interrogative contexts, including for embedded questions. They have a preference for consistent V3 for declarative contexts, including those with fronted negative operators or in SI contexts. It seems then that they have not even generalised at the micro-level. As we have seen, NI is optional both at the group and individual level. What's more, this optionality is apparently regulated by the surface properties of the fronted constituent as restrictive XPs are significantly more likely to give rise to non-target V3 than fronted overt negative XPs. Thus, on the assumption that NI can be analysed as a consistent micro-parameter with a distinct underlying structure involving fronting to a Neg(ative)Foc(us)P, acquiring the properties of this structure is inconsistent for the learners.

In addition, as already outlined above, word order in English declaratives may be ambiguous with respect to V2, i.e. S-V-O and S-Aux-V-O order. However, the same empirical problems as with a global parameter resetting approach apply and if this evidence reinforced V2 in declarative TopP, we would expect evidence that declarative sentences may involve subject raising to Spec-TopP and head movement to the Top head. Again, then assuming V in situ has been acquired, we would expect to find ungrammatical V2 with *do*-insertion in declaratives contra the findings.

While theoretical predictions of a mutually inclusive parameters model finds some support, similar empirical problems as with micro-parameters apply. Recall that on the theoretical level, Ayoun (2003: 150) proposes that an overlap in L1-L2 mutually inclusive parameters will make it more difficult to reset these parameters. Thus the fact that English and German each instantiate different major/minor settings of the V2

parameter “will result in some delay” (Ayoun 2003: 150). At a superficial level, this is confirmed. It seems clear that there is some delay which is specific to V2, where there is an overlap in parameter settings. There is also overlap in the verb movement settings of English and German. In German, all verbs raise out of VP while in English only auxiliaries and thematic *be* and *have* raise. And again, there is some variability in interrogative and negation contexts where thematic verbs with the same form as auxiliaries may also raise.

However, this is basically theoretically descriptive and posits that where there is variability at the level of the target linguistic system as a whole, there will be variability in acquisition. It also restates in effect the learnability problem that, having established a superset grammar, acquiring a subsequent grammar which instantiates a subset property will be problematic. For mutually inclusive parameters in particular, there is little evidence of a deductive process of resetting of individual minor parametric options. In the case of verb raising it seems that the residual difficulties are at the level of associative pattern-matching. Thematic verbs with the same morphophonological form as auxiliaries may continue to raise, rather than a clear morphosyntactic distinction being established on the basis of the auxiliary/thematic distinction. Negative inversion is also clearly not acquired in a consistent way. Individual learners produce both target inverted and non-target uninverted orders. They have obviously acquired the fact that English requires inversion after fronted negative operators but this has not lead to a consistent minor parametric setting, but rather it is more probably still connected to a specific lexical instantiation of negative inversion. This is obvious again in the distinction between restrictives and overt negatives, where the prototypical negative elements give rise more consistently to subject auxiliary inversion.

10.4 The Interface Hypothesis

The nature of the V2 transfer data is predicted more naturally by the Interface Hypothesis than by global or multiple/micro-parametric models. Basically, the problem is confined to inversion in contexts where a constituent is fronted or topicalised, i.e. the interface with discourse-pragmatics (as proposed by Sorace 2005). The narrow syntactic verb movement operation motivated by Agreement is acquired more easily than

interface properties connected to V2. An interface model has the added advantage of being applicable not only to the V2 inversion transfer data, but also to the acquisition of English word order variation. So, for example, the Interface Hypothesis can be applied to the nature of stylistic and locative inversion structures. It was seen that SI in the corpora conforms by and large to native norms to the extent that it conforms to the syntactic restrictions on its realisation. Only unaccusative verbs occur in these structures showing that target syntactic structure has been acquired. Similarly, SI in the judgement task is judged to be more acceptable than the inversion of other thematic verbs showing that the syntactic constraints on the verb in inversion structures are in place. However, the discourse and information structural constraints on the distribution of SI and the status of the subject and fronted constituents have not necessarily been acquired. Similarly, the adverb data also falls more straightforwardly into line in an interface account. Adverb placement in a clause is regulated by discourse and semantic constraints, giving rise to the apparent “irregularity” in surface distribution alluded to by Chu & Schwartz (2005). It can therefore be predicted on the basis of the Interface Hypothesis that the narrow syntactic nature of verb movement is relatively unproblematic, the problem which gives rise to variable adverb placement is due to the lack of mastery of interface properties which constrain the scope and placement of adverbs.

We will further look at the application of the Interface Hypothesis to ungrammatical inversion around copula *be* and auxiliaries which appears to be the result of transfer of V2. ‘Ungrammatical’ is in fact not entirely an apt term for these structures as they do not violate any syntactic rules of English as copula *be* and auxiliaries may raise and appear in surface V2 configurations.

Inversion of Copula Be

The most pertinent evidence comes from the distribution of non-target inversion of copula *be* (10.5). The syntactic configuration here is accurate to the extent that there is inversion after fronted complements of copula *be*. The infelicity of these structures is due to the fact that a bare adjectival predicate has been fronted. The difficulty is therefore specific to the type of constituent which may be fronted.

- (10.5) a. **Essential is** just who decides what we can watch and why. (ICLE-GE)
 b. **But grey is** all theory. (ICLE-GE)
 c. **Problematic, though, is the fact** that < ref > (WUCLE)

The fact that these sorts of structures persist, and would perhaps be subject to fossilization even at the end-state in L1 German-L2 English interlanguage would be predicted by a conspiracy of the role of the L1, the nature of the input and difficulties acquiring interface properties. Starting out with a V2 grammar, learners must on the basis of the input establish the fact that with copula *be* in English, only a restricted subset of constituents may be fronted giving rise to inversion. So, on the surface, the many English copula inversion structures are identical to those in German, see Exs (10.6) and (10.7).

- (10.6) a. Word order is one difference between English and German.
 One difference between English and German is word order.
 *One difference between English and German word order is.
 b. Die Wortstellung ist ein Unterschied zwischen Englisch und Deutsch.
 Ein Unterschied zwischen Englisch und Deutsch ist die Wortstellung.
 *Ein Unterschied zwischen Englisch und Deutsch die Wortstellung ist.
- (10.7) a. My office is beside the library.
 Beside the library is my office.
 *Beside the library my office is.
 b. Mein Büro ist neben der Bibliothek.
 Neben der Bibliothek ist mein Büro.
 *Neben der Bibliothek mein Büro ist.

The input therefore provides reinforcement for a (consistent) V2 grammar for L1 German speakers acquiring English. Establishing the correct distribution of fronted complements of the copula, i.e. that only comparative adjectival complements may be fronted giving rise to inversion, would therefore be difficult on the basis of evidence in the input. There is evidence available that adjectival complements may indeed be fronted (10.8). However, this positive evidence in the input, i.e. the presence of Adj_{COMP}-be-Subj sequences, only serves to provide evidence that adjectival elements can be fronted but does not rule out the possibility that non-comparative adjectival constituents cannot be fronted. The subset of distributional possibilities in English predicts that L1 German speakers will not retreat from the superset grammar which imposes no restrictions of the type of fronted XP.

- (10.8) **Even more alarming** is the fact that heroine, LSD, and peyote are other Schedule 1 drugs. (LOCNESS)

A further difficulty for learners in this case is a rather complex syntactic structure would be required in English to achieve the same pragmatic effect as can be expressed by fronting/inversion in German. This would most naturally be expressed with an it-cleft or pseudo-cleft to foreground the adjective in English.

- (10.9) *Important for today is the positive acknowledgement ... (from ICLE-GE)

It is important for today that we acknowledge...

What is important for today is the...

Thus, a prediction of the Interface Hypothesis finds support, i.e. where an L1 has a more economical means of encoding pragmatic options, this will continue to optionally transfer to the L2. This raises the question of what it means to be more economical. This can be captured in a psycholinguistic approach whereby learners do not have the resources to produce online the appropriate syntactic mapping for a given discourse-pragmatic option. Alternatively, learners may not have an appropriate representation for clefting and may therefore rely on the economical V2 means which allows fronting of any constituent thereby foregrounding/focussing/topicalising the constituent in question. There is, however, evidence for clefting in the corpus data, which suggests that there is no problem of knowledge representation, rather the problem rests with the accessing these representations online. One would therefore predict that these sorts of transfer errors would occur more frequently in speech and would be amenable to experimental manipulation so that more such errors should be produced under the influence of outside variables which put more processing load on learners during production.

Subject Auxiliary Inversion

An interface analysis of non-target subject-auxiliary inversion in declaratives is not as straightforward as the analysis of the adjective-copula inversion structures. Robertson & Sorace (1999: 336) observe for their corpus data that there appears to be no special pragmatic force associated with the fronted constituent in instances where V2 has transferred, although they point out that this would require further research. On a superficial level it appears that the corpus evidence discussed in Ch. 8 provides support

for this result to the extent that there are a range of different constituents which occur as the initial XP in V2 transfer tokens. However, a closer examination illustrates that one can in fact identify more similarities in the nature of the fronted constituents and V2 inversion structures than is suggested simply by the surface form or function. There is a tendency for the fronted constituents in the V2-L1 learners' production to overtly express emphasis, thus motivating fronting. In addition, the fronted constituents or the way in which they are deployed in context is often not possible in English while maintaining the intended scope interpretation, but this is possible in the L1 (10.10). This raises the possibility that what has transferred here is a whole information structural pattern as expressed by a V2 configuration. This accords with Bohnacker & Rosen's (2007a, b) findings that L1 Swedish learners of L2 German transfer information structural preferences as they continue to exploit the prefield position in German to host constituents which may be felicitously fronted in Swedish but not in German.

- (10.10) a. **Only has** this place become smaller. (ICLE-DU)
 b. **Already then did America** see itself as a kind of global cop (they used the term very frequently in post-war months) (ICLE-DU)
 c. **And still do they** have a very powerful army. (ICLE-DU)
 d. **So long did I** have to queue for the practical that I was thinking about nicking the secretary's cheese and ham toasty... (ICLE-GE)
 e. **Even slower did emancipation** proceed in religious fields. (ICLE-GE)
 f. Within the European Union not only the attitude towards the use of anglicisms varies, **but also is English** used on different levels. (WUCLE)

In the ICLE-GE examples, the intended emphatic interpretation of the fronted constituents is also indicated by lexical means with 'so' and 'even' modifying the fronted manner adverbials. These would however be more natural in clause-medial positions with narrower scope over the predicate. These constituents are anomalous in a fronted position in English, non-adjacent to the phrases they should directly modify. The same applies to the Dutch speakers' examples in (b) and (c) where the fronted adverbials are no longer adjacent to the VPs they modify, disrupting the intended scope relations. In (e) the adverbial has the morphological form of an adjective, as would be the case in German. This again adds to the impression that the initial constituent is directly transferred from German and reflects L1 restrictions on the realisation of morphological forms. The same can be applied to the WUCLE sample where 'also' is anomalous in this fronted position. Where it is fronted in English it takes scope over the

whole clause, while in this case, again, it has a more narrow scope over the predicate and would be felicitous in an unmarked position (“...English is also used...”). Yet again, ‘also’ in this case seems to be used in the same way as the German equivalent ‘auch’ and can be fronted while a narrow scope interpretation remains available. In (a) ‘only’ appears to be intended with a contrastive meaning as in ‘but.’ It is informative that the Dutch lexical item *maar* can be translated as either ‘only’ or ‘but’ in English.

It seems then that the V2 structures here involve the transfer of an information structural pattern from the L1 connected to the nature of the fronted constituent. Where some special emphasis is intended, there is a tendency to rely on the V2 construction in order to be able to front a constituent to a unique prefield position. The learners exploit subject-auxiliary inversion to create this initial prefield position, thereby maintaining L1 information structural options without violating narrow syntactic constraints in English. An obvious question here is whether or not an underlying V2 constraint is transferring or a whole surface pattern is transferred from directly from the L1. We return to the constructionist account below.

Support for the underlying syntax proposal comes from the fact that *do*-support is in evidence in the V2 inversion structures, see (10.11). This cannot be transferred directly from the L1.⁵² Rather, it can be assumed that this is an overt expression of the requirement to fulfil an underlying syntactic requirement and that *do*-support as a possible operation in the input is adopted to maintain V2 in the absence of the possibility of thematic verb raising to a the appropriate position. This could be formalised by assuming that either a German CP functional projection, or [affect] features, may transfer and therefore force V2 only with fronting or topicalisation and would not affect other linear orders. However, this provides an ultimately unsatisfactory model as the nature of the optionality remains unexplained and the analysis remains in effect at the descriptive level of ‘V2 is optional after fronted constituents.’

- (10.11) a. Nowadays **do not only students** cry out loud, but it's especially their parents who run amok among schools and ministeries... (ICLE-GE)
b. So long **did I** have to queue for the practical that... (ICLE-GE)

⁵² Periphrastic *tun* is possible in various German dialects (see Langer 2001). However, it is not subject to the same distribution as auxiliary *do* in English.

10.4.1 Formalising an Interface Approach

In order to go beyond the claim that V2 simply remains optional, it would be desirable to formalise a model which can account for, and predict the nature of the optionality. Explanatory and predictive models for the interface optionality of L2 null subjects have been suggested. It has been shown that the optionality of null subjects is not unconstrained but rather is localised in certain contexts. For example, specific interpretable features may be affected such as [topic-shift] (Sorace 2004). This can be refined even further, Lozano (2009) shows that representational deficits of L2 null-subjects are apparently selective and mainly affect the 3rd Person paradigm. For V2 transfer data, no comparable analyses have been suggested which may successfully explain and predict its occurrence.

Although they pre-date the development of the Interface Hypothesis, the analyses offered by Hulk (1991) and Robertson & Sorace (1999) in effect amount to an interface model. Hulk (1991) observes that the nature of the target language input (French in the case of her study) may lead L1 Dutch speakers to allow their L1 topicalisation parameter to transfer while verb placement is reset quickly. However, the connection between topicalisation and the verb movement operation which allows us to identify V2 transfer in the surface string remains vague in her analysis. There is also no significant further constraining of the transfer of V2. It is stated that, likely due to psychotypological markedness, optional transfer may persist with fronted adverbials as opposed to topicalised arguments. However, in effect the claim is then that fronted adverbials may or may not trigger V2 without providing any more specific constraints. What's more, this distinction is not necessarily robust. On the basis of her L1 Norwegian-L2 English data, Westergaard (2003) advances the opposite claim that fronted arguments are more likely than adverbials to trigger V2. So while the essentials of an interface model are in place, the logical conclusion must be that fronting of constituents optionally triggers V2 without any more explanatory power.

Robertson & Sorace (1999) formalise similar empirical findings with the assumption that the problem is connected only to a transferred German [affect] feature. It is assumed in an asymmetric V2 analysis that this gives rise to V2 in German and is available in the interlanguage lexicon and may enter the derivation of sentences where a

constituent is fronted. This provides a sound descriptive formalisation of what factors might be at play in the transfer of V2 from German to English. However, the theoretical underpinning of this analysis depends on the validity of the idiosyncratic implementation of an asymmetric V2 analysis on the basis of affect features for German, which is by no means universally accepted. Schwartz & Vikner (1996) for example provide detailed counterarguments to asymmetric V2 in general and, in fact Robertson & Sorace (1999: 352) observe that they “are not in a position to adjudicate on the rival merits of the asymmetric and asymmetric approaches... but there is one consideration which makes the asymmetric approach more attractive from our point of view: namely [...] V-to-C raising occurs only when the speaker exercises a pragmatically motivated choice to front a non-subject constituent.” Given the superior and more consistent empirical coverage of the symmetric analysis, I would argue that we are indeed in a position to adjudicate and must accept the symmetric analysis as the more realistic analysis. From this starting point, an analysis of the L2 data based on asymmetric V2 becomes somewhat circular as one is forced to accept a questionable syntactic analysis of German in order to account for the L2 data. Even if this serious issue is left aside and the asymmetric approach is accepted, the resultant analysis of the L2 data remains somewhat descriptive and the model fails to constrain or predict the occurrence of optional V2 transfer. It simply assumes that the strong [affect] feature may be carried by any fronted constituent, and when it is present, V2 results and when it is not, target V3 is the result.

There is also a problem in formalising this insight in terms of minimalist syntactic apparatus. If interpretable features such as topic, focus, etc are the locus of these difficulties, one must ultimately claim that these remain in some way undetermined or variable in the L2.⁵³ The optionality of target and non-target forms suggests that the target values can be attained but that they remain indeterminate. It is not clear how this variability can be captured in a robust analysis. One way around this problem would be to accept along the lines of a Failed Functional Features analysis that the parameters have not been reset at all but rather that L1 German speakers will always have an

⁵³ This applies, of course, only to a representational interface approach assuming as it does that the problem is to be located in the knowledge representation of the L2. It is possible that a processing approach to interface difficulties might make a more satisfactory analysis possible. As the nature of the data explored in the corpus and judgement experiments does not speak directly to questions of processing, I leave this issue aside here.

underlying [+V2], [+Agr] grammar and must adopt alternative analyses to accommodate the English input. However, it is not clear what plausible alternative underlying representation could allow the sort of target production. In addition, it would be unclear why the [-Agr] properties of English are apparently more or less completely acquired.

10.4.2 Assessment

The main claims of the Interface Hypothesis find support from the nature of the subject-auxiliary inversion data. There is evidence that this can be localised in terms of the transfer of information structural patterns from the L1 rather than a syntactic operation as such. This raises the question of whether or not the transfer is at the surface level of entire patterns from the L1 or the residual operation of a V2 constraint. It is not clear what analysis would permit us to successfully capture the nature of the optionality of the assumption that it is an underlying syntactic operation which continues to transfer. In addition, while the interface hypothesis can be applied to the subject-auxiliary V2 transfer data, it cannot account so successfully for the nature of V2 transfer with equative verbs. The judgement data suggests that this transfer may persist even after learners reject subject-auxiliary inversion in declaratives in a target-like way. This remains unexplained on an interface approach.

10.5 A Constructionist Account

The results appear to point to the fact that setting underlying parameters is not at work in the acquisition of English word order/transfer of German word order in L1 German-L2 English interlanguage. We explore in the following sections a constructionist, pattern-matching approach to the data based on the assumption that L2A is not guided by implicit deductive resetting of underlying parametric options but rather by item-based learning of surface constructions. It will be suggested that this seems to account for the totality of the data more satisfactorily than assuming parameter resetting. Let's clarify firstly what a constructionist approach means and what it does not mean in the approach to be developed. Firstly, while reference will be made to work from the Construction Grammar camp (e.g. Habermehl 2005 on L2A), this should not be interpreted as an endorsement of such a theoretical model of grammar per se. Rather,

the constructionist model from within a broad generative theoretic approach (e.g. Herschensohn 2000; Bley-Vroman 2009) assumes that the interaction of UG and implicit learning guides first language acquisition but that this mechanism and parameter setting is no longer available in L2A. For L2A, while UG constrains *the form* of the grammar at any given point in development, access to UG is through the L1 and the learning of the L2 involves general learning principles such as item-based learning, categorisation and pattern-matching over surface structures in the input, as suggested by Bley-Vroman (1989, 1997).

The notation I will use to exemplify the sort of constructions assumed to underlie L2 competence is in the form of modified phrase structure rules (Bley-Vroman 1997) and lexically-specific utterance schemas, which may have empty slots (see e.g. Tomasello 2003 on L1A; Habermehl 2005, 2006 for L2A). It should be pointed out that this sort of formalism is descriptively very permissive and in principle any utterance could be assigned to a more or less abstract construction. The underpinning of this approach, which is outlined below, is derived from the fact that a number of non-target structures appear to be lexically specific and so seemingly constrained by surface lexical properties rather than underlying abstract operations. The explanatory power of constructionist mechanisms is particularly relevant for the results of non-target inversion copula *be* and around equative verbs (see below) by positing only general learning principles and surface generalisation or analogical extension without further stipulations. Nevertheless, I would remain tentative about a constructionist to V2 until it is more extensively tested.

The approach does not preclude the possibility that creative grammar construction is possible, but would contend that this creative construction proceeds on the basis of categorisation or associative learning of surface patterns. This coincides to a significant degree with Herschensohn's (2000) constructionist approach, which assumes that parameters are set on a construction by construction basis. However, the Herschensohn idea that functional features are initially underspecified and are gradually acquired is abandoned in favour of assuming that parameter resetting is ultimately not taking place at all but that constructions become more abstract to allow eventually for a range of creative surface constructions which go beyond the input (Bley-Vroman 1997).

10.5.1 On the Equative Semantic Class Again

The sort of apparent verb-raising structures with equative verbs that we have already encountered in the corpus and judgement data will play an important role in the argumentation that constructions are at work in the transfer of V2 patterns from L1 German and in the acquisition of the V2 properties in English. The acceptability judgement evidence provided support for the patterns identified in the corpora, which suggested that there was a marginal tendency for learners to continue to allow thematic verbs to raise, but only when these thematic verbs belong to the equative semantic class and function more or less as a copula in context. While these results are suggestive, recall that they are based on a rather restricted dataset. To test how robust these results are, a supplementary study was carried out, the results of which have been reported in Rankin (2009).

This supplementary experiment was a pencil and paper test of the judgements of a group of 20 L1 (Austrian) German learners of English in the first semester of a degree course in English Language and Literature (proficiency on Oxford Quick Placement Test ranged from ‘Upper Intermediate’ to ‘Very Advanced’). The test sentences are provided in Appendix 3. The experiment was designed to test solely the acceptability of V2 structures with different types of *thematic* verbs. None of the sentences tested ungrammatical subject-auxiliary inversion.

The different classes of verb were operationalised as follows.

- i) Equative Lexical: thematic verbs with copula-like argument structure of the form NP1 *equals* NP2
- ii) Intransitive: intransitive verbs with a single external argument.
- iii) Copula: *be*
- iv) Thematic Lexical: ‘true’ transitive thematic verbs with an active patient-affected theme argument structure

Participants judged a total of 40 sentences, 24 of which were the test sentences, presented in a random order for each student, two tokens each of the structures in Table 10.1 with the exception of one token each for the intransitive and equative interrogatives.

Copula	Equative	Intransitive	Thematic	Grammatical
*Adv-be-Subj	*NP _{Obj} -V _{Equate} -NP _{Subj}	*Adv-V _{Intrans} -Subj	*Adv-V-Subj-Obj	Adv-Subj-V Obj-Subj-V
*Comp-be-Subj	*Wh _{Arg} -V _{Equate} -Subj	*Wh _{Adv} -V _{Intrans} -Subj	*Obj-V-Subj-Adv	Wh-V _{Aux} -Subj
Comp-be-Subj			*Wh-V-Subj	

Table 10.1 : Structures in equative verb judgement task

Overall the learners preferred grammatical V3 structures. In the judgement of ungrammatical sentences, there was, however, a significant effect of verb type. A repeated measure ANVOA with verb type as test factor revealed that the structures XP_{ADV}-V_{INTRANS}-Subj and NP_{Obj}-V_{EQUATIVE}-NP_{Subj} pattern together (and with ungrammatical inversion around *be*) and are judged significantly more acceptable than inversion around transitive thematic verbs, $F(2.6, 46.71) = 11.55, p < .001$. This again confirms the previous results but on this occasion it seems that transitivity might be a relevant factor as intransitive thematic verbs follow the same pattern as equatives. However, the test sentences with intransitive verbs, although designed to be ungrammatical, could in principle give rise to locative or stylistic inversion structures and may be marginally acceptable (10.12).

- (10.12) a. At the end of the semester take place the exams.
b. Outside the library occur most discussions.

The fact that these sentences are not subject to the same constraints as those with equative verbs is illustrated by the judgement of thematic verb placement in interrogatives. Again, grammatical SAI was preferred overall in questions. There was also again a distinction in the judgement of ungrammatical sentences based on verb type. However, unlike declaratives, $Wh_{Adv}-V_{INTRANS}-Subj$ patterns with other ungrammatical thematic verb inversion and $Wh_{Arg}-V_{EQUATIVE}-Subj$ structures alone are judged significantly more acceptable, $F(1.36, 20.42) = 10.88, p < .005$.

So it would seem that the finding that L1 German learners of English have specific problems with the distribution of equative type verbs is robust. In addition to these empirical findings, anecdotal evidence suggests that forms such as “What means that?” are widespread in the production of learners and persist even at relatively advanced stages of acquisition. How can these facts be explained? The original motivation for testing such sentences came from Roeper’s (1999) suggestion that V2 might be overextended in L1A to other verbs within the lexical class to which *be* belongs. This seems unlikely, at least in the L2A context. It is clear that learners disallow thematic verb movement in general apart from with equative verbs, for which a theoretical explanation in terms of a movement parameter would be difficult to formulate. It could be argued that Roeper’s (1999) multiple grammars provide an explanation as the model assumes there are individual grammars for each lexical class. However, for the learners there is optionality even *within* the lexical class. The learners obviously produce also target structures with these verbs; but if they were associated with a V2 mini-grammar it is not clear why they do not *consistently* give rise to V2. The logic of the multiple grammars claim would be that equative verbs should pattern like *be* in a range of other contexts where *be* also inverts. However there is no evidence that this is the case, with patterns such $Adv-V_{Equate}-Subj-Obj$ apparently never being produced. In the judgement tasks learners consistently reject sentences with this sort of structure with both arguments occurring after the thematic verb. It would seem therefore that the problematic structures are confined to specific constructions as in (10.13)

- (10.13) a. NP1 *equals* NP2
b. *What equals* NP?

It might be claimed even from a parameter resetting point of view, that this can be explained as a purely surface property which might be due to the nature of the grammaticality judgement test. One could say that when the learners encounter these sorts of sentences, they accept them simply on the basis of the fact that they do not on the surface violate any syntactic rules of English and rather that the infelicity of these examples are due to a semantic problem rather than a syntactic one. However, the fact that the learners also produce this sort of structure indicates that acceptance of the sentences in the judgement test is not simply an artefact of the acceptability testing procedure. Rather there must be some representation which also permits the learners to produce these sorts of inversions structures. One must assume that this is due to the influence of L1 German, which permits these surface patterns.

V2 and Copula Constructions

If we assume that these constructions are the result of generalisations of surface patterns influenced by L1 German, the troublesome facts all fall into line and follow naturally. What is being suggested then is that these sorts of structures are not due to the transfer of an underlying syntactic verb movement operation, but are simply surface pattern generalisations. Thus, the problematic status of the apparent raising of equative verbs in the absence of movement in other contexts is obviated. We can assume that the copula constructions are the result of transfer of L1 surface patterns and the influence of English surface patterns. This can be captured by Bley-Vroman's (1997) outline of how constructions are added to an L2 grammar. Recall that he proposes that a learner will add a construction to the L2 grammar particularly easily when there is a perceived correspondence in surface structure between the L1 and L2. Even if the construction in question is not in fact a fully target structure, it will then also persist in the grammar. He notes elsewhere that "[t]he native language must be sifted: That which is likely to be universal must be separated from that which is an accidental property of the native language" (Bley-Vroman 1989: 52). This is the case for constructions with copula *be* in English and German where there is a strong, but not categorical, correspondence in

linear orders, which would lead a learner to assume that the relevant structures in English are the same as in German, see Exs. (10.6) and (10.7) repeated here as (10.14) and (10.15).

- (10.14) a. Word order is one difference between English and German.
 One difference between English and German is word order.
 *One difference between English and German word order is.
- b. Die Wortstellung ist ein Unterschied zwischen Englisch und Deutsch.
 Ein Unterschied zwischen Englisch und Deutsch ist die Wortstellung.
 *Ein Unterschied zwischen Englisch und Deutsch die Wortstellung ist.
- (10.15) a. My office is beside the library.
 Beside the library is my office.
 *Beside the library my office is.
- b. Mein Büro ist neben der Bibliothek.
 Neben der Bibliothek ist mein Büro.
 *Neben der Bibliothek mein Büro ist.
- (10.16) a. What is the answer?
 (*What does the answer be?)
 Was ist die Antwort?
- b. Where is the book?
 (*Where does the book be?)
 Wo ist das Buch?

Not only is there a direct one-to-one surface mapping between these structures, but copula structures are very frequent in the input, both in terms of natural spoken and written English and in the more controlled input available in pedagogical settings to learners. Therefore there is strong and frequent evidence to motivate L1 German speakers to add the constructions in (10.17) to their grammar for English under the assumption that English is identical to German in relevant respects.

- (10.17) a. NP1-*be*-NP2 / NP2-*be*-NP1
- b. NP-*be*-Locative XP / Locative XP-*be*-NP
- c. Wh-*be*-NP

So they have a class of constructions that allow relatively unconstrained inversion of argumental and locative complements, and inversion of NP arguments and *wh*-constituents around *be*. It can be assumed that these constructions are initially lexically-

specific and occur only with copula *be*. To capture the further facts of ungrammatical inversion around equative verbs we need only propose that the copula constructions are subject to a further level of abstraction on the basis of the interaction of the further influence of L2 English input and L1 German structure (10.18).

- (10.18) a. NP1-*equals*-NP2 / NP2-*equals*-NP1
 b. NP-*equals*-Locative / Locative-*equals*-NP
 c. Wh-*equals*-NP

Due to verb second and case marking, a range of German structures can be described by these constructions. The same applies to English on the surface but the lack of overt case marking and the lack of verb second with thematic verbs means either that the resulting surface structures are ungrammatical or that the semantic interpretations of inverted structures are not the same as their uninverted counterparts (compare 10.19 and 10.20).

- (10.19) a. Das Erwachsensein bedeutet den Tod der Kindheit.
 the.NOM adulthood means the.ACC death the.GEN childhood.
 b. Den Tod der Kindheit bedeutet das Erwachsensein.
 the.ACC death the.GEN childhood means the.NOM adulthood.
 c. Was bedeutet das Erwachsensein?
 what means the.NOM adulthood?

- (10.20) a. Adulthood means the death of childhood.
 b. #The death of childhood means adulthood.
 c. *What means adulthood?

The overt case marking in German renders the argument structure more transparent and permits the inverted and uninverted sentences to remain propositionally identical. In English this is not the case, and in the examples given here inversion gives rise to an unpragmatic interpretation. However, there are possible inverted constructions in English with these sorts of thematic verbs where the semantics is not substantially affected and the verb serves truly just to link the arguments, for example in giving translations, which instructed learners will have exposure to in classroom settings, see (10.21).

- (10.21) a. Handy bedeutet “mobile phone.”
 “Mobile phone” bedeutet Handy.
 b. “Handy” means mobile phone.
 Mobile phone means “Handy.”

So, given that learners have abundant evidence to establish *XP-equals-XP* constructions and given the fact that the lack of case marking renders the argument structure of equative thematic verbs somewhat opaque, English structures with equative thematic verbs can be assigned to the copula constructions and therefore reinforce these. In effect, under a process of analogical extension, any verb with appropriate lexical-semantics can be inserted into the *equals* slot in the construction. Note that optionality is accounted for on this view as the relevant construction is specific to the argument structure of equative verbs rather than being associated with the V2 distribution of *be* in English, thus *Adv-equative-Subj-Obj*, which is not attested, is not predicted to occur. Similarly the interaction of the proposed copula constructions with prototypical constructions can explain the continued co-existence of target and non-target forms (cf. Bley-Vroman 1997).

It must be assumed that the learners have also established *prototypical* declarative and interrogative constructions for English based on the frequency with which different clause-types are present in the input (cf. Bley-Vroman 1997 again on prototypical clauses). For declaratives, this would be $NP_{\text{Subj/Agent}}-V_{\text{THEMATIC}}-NP_{\text{Obj/Theme}}$ and for interrogatives $Wh-V_{\text{AUX}}-Subj-V_{\text{LEX}}$. When it comes to producing (or in the case of acceptability experiments, judging) declaratives and interrogatives these structures will be available, and being prototypical will result in target-like behaviour most of the time. For example, in judging an ungrammatical sentence of the form in (10.22), a learner who has accessed the prototypical declarative construction will notice the semantic incongruity between this and the prototypical argument structure. However a learner treating this as a copula construction will find it acceptable.

- (10.22) The results of the study shows the graph.

So the proposed declarative and interrogative copula structures will also be available and, in terms of the whole L2 system, will not have the same weight as the prototypical constructions in the sense that it is an optional variant which applies only in a restricted range of contexts (Bley-Vroman 1997). Nevertheless, in those instances where an utterance contains an equative-type verb, the copula constructions may override the prototypical constructions, thus *rarely but optionally* giving rise to non-target production/judgements, as is evidenced by the corpus data and judgement tasks.

10.5.2 Copula Be and SAI from a Constructionist Perspective

The non-target inversion of copula *be* after bare adjectival complements can be explained on the basis of the copula constructions discussed above. These constructions allow more or less ‘free’ inversion around copula *be* in that nominal arguments can appear in both possible orders. The same applies straightforwardly to those examples where it is an adjectival complement which is fronted. The parallel construction to (10.18) above in the learners’ grammar would be (10.23).

(10.23) Copula Sentence → NP_{Subj}-*be*-Adj / Adj-*be*-NP_{Subj}

These alternative constructions can be derived from the existence of the general copula constructions proposed above. However, there is also evidence from German and English that would motivate the presence of these constructions in the grammar. German allows these sorts of structures as there are few restrictions on what type of constituent may be fronted to the prefield positions, and so they are available to transfer to L2 English. Secondly, English in fact allows a similar construction with fronted adjectival predicates (10.24), as discussed above. However, as only a specific subset of adjectival complements may be fronted to give rise to inversion, there is no positive evidence to contradict the assumption that adjectival complements in general may be fronted.

(10.24) **Even more alarming** is the fact that heroine, LSD, and peyote are other Schedule 1 drugs. (LOCNESS)

Copula Sentence → NP_{Subj}-*be*-Adj / *Adj-*be*-NP_{Subj} / Adj_{Comparative}-*be*-NP_{Subj}

The same insights from the Interface Hypothesis discussed above apply to these constructions. Learners might optionally fall back on this structure to express foregrounding or emphasis of the fronted adjectival predicate where they may not have established a target cleft-construction to express the same pragmatic function. Once the cleft-construction is part of the grammar, it will progressively replace the inversion construction as the prototypical pragmatic option for foregrounding. However, for the learnability reasons cited above, i.e. that English forms a subset of German and positive evidence in the input does not rule out the non-target pattern, the inversion construction will likely not be definitively deleted from the grammar and will persist as a residual alternative option.

Subject Auxiliary Inversion

To account for the occurrence of V2 transfer in the form of non-target subject-auxiliary inversion in declaratives, we have recourse to the idea of blended constructions, i.e. constructions which incorporate elements of both the L1 and the L2 in a single constructional frame. This sort of mechanism has been proposed by Haberzettl (2005: 67), who shows that individual target constructions may be combined in an innovative way by L2 learners to form blended constructions. Drawing again on insights from the Interface Hypothesis, it will be suggested that these constructions are more likely to be connected to difficulties with pragmatic or information-structural word order variation rather than basic word order patterns. This would predict that inversion constructions can be distinguished from an underlying V2 constraint and therefore only inversion structures are in evidence as instances of transfer.

As will be discussed below, the learners must have an appropriate subject-auxiliary inversion construction for interrogatives in English. It is proposed then that under the influence of L1 German, this construction is subject to a further level of abstraction where it may be combined in an innovative way with the prefield position from German and can therefore host any constituent rather than just interrogative constituents. Thus, they notice that auxiliaries invert and posit that this can take place after other constituents and not just *wh*-elements, giving rise to a blended construction as in (10.25). In effect, the SAI construction which is available in the input and has been

acquired by the learners is co-opted to express an L1 information structural option. The notion of a blended construction is necessary in this case to explain why *do*-insertion is used by the V2-L1 learners to produce inversion in declaratives as this is an English syntactic device which is not available in the L1.

- (10.25) a. Wh-V_{AUX}-Subj-V_{LEX} (target English interrogative construction)
- b. XP_{Prefield}-V_{AUX}-Subj-V_{LEX} (blended construction: SAI and German prefield)

What is being suggested by the blended V2 construction is that learners may transfer information-structural or discursive principles which are associated specifically with fronting to clause-initial position (as outlined also for L1 Swedish-L2 German by Bohnacker & Rosen 2007a, b). The combination of English SAI with German clause-initial information-structural properties serves to create a unique prefield position in English to host information-structurally relevant constituents; the non-target construction is therefore connected to specific pragmatic properties. Interface difficulties predict that this might be the case as fronting to a unique prefield position in German is an economical means of encoding a range of information-structural properties for which English must use different mechanisms, e.g. clefting, lexical means or phonology in speech, as word order is more rigid. On this analysis, what is transferring in these circumstances is information-structure rather than syntax. This would predict that the initial constituent in transfer structures must have some special information-structural status (contra the findings of Robertson & Sorace 1999: 336).

This is obviously the case for exclamative V2 clauses produced by the learners in ICLE-GE where the fronted constituent is clearly being given a special pragmatic prominence (10.26). From an interface point of view, this can be captured by the fact that learners might not be sure how the L2 encodes this specific pragmatic option so they rely on a possible L1 mechanism (recall that German permits a verb-final structure with the same pragmatic force but the fact that there is no evidence whatsoever in English for V-final structures would prevent this form from transferring). In addition, these linear orders would be completely target-like if the initial *wh*-phrase were functioning as an

interrogative rather than an exclamative, and so may even be analysed as an inversion construction lexically linked to these *wh*-constituents.

- (10.26) a. How wonderful **would life be** with such a program.
b. How peaceful **will life be** when his work will be done!
c. How old **must they be** indeed!
d. How joyful **can it be** to read a good book, how much can we learn from it and how great is it to travel into anew and unreal world.

These could in fact be analysed as the transfer of one of the exclamative constructions directly from German as the linear order of the whole construction corresponds directly with the German order. Recall from above that it was suggested that it is possible that some of the instances of V2 transfer might be the result of transferring a surface pattern in its entirety from German (or Dutch), refer again to (10.10). We find further evidence in the examples in (10.27) from WUCLE. The highlighted element reflects not only the transfer of V2 structure but of direct usage of a German morphological expression of an irrealis construction ('es mag sein'). Thus, apparently the whole German construction is being used in this case with English lexical items inserted. Similarly, in (10.28) from ICLE-GE, the relative pronoun is marked for an oblique case, as it would be in German where dative would be required. Thus V2 transfer is accompanied by other transferred elements indicating that a surface pattern schema has been transferred directly from German and the inserted English lexical items correspond as closely as possible to the German requirements.

- (10.27) As a consequence, the flow of information and knowledge between the units of MNC will be restricted to a small amount of people with the right language skills, **may this be** the local subsidiary's language or the common corporate language.

- (10.28) For them it is quite frustrating to see other peoples who are rich from birth, and **whom will everything be put** in their laps because the have the right connections to certain circles.

Thus, for declarative sentences, learners have a prototypical target-like V3 declarative sentence construction in addition to an optional V2-SAI construction which allows them to maintain in English pragmatic and semantic relations from the L1, see (10.29). Again, the basic insights of the Interface Hypothesis can be applied here, so where learners may not have knowledge of the subtleties of L2 semantic and pragmatic

interpretation which are not read directly off the linear order, they may fall back on the L1 option.

(10.29) Declarative → (XP)-Subj-V-Obj / XP_{Prefield}-Aux-Subj-V_{LEX}

In general this constructionist approach is preferable to previous analyses as it constrains the occurrence of V2 transfer to subject-auxiliary inversion. On the assumption that associative learning and surface pattern-matching is at work it is unproblematic that V2 transfer is confined to inversion of auxiliaries, copula be or equative verbs as the presence of these constructions can all be motivated by evidence in the input alongside continued L1 influence. This would remain mysterious in an analysis which assumed parameter resetting. The constructionist approach combined with the Interface Hypothesis also predicts that non-target subject-auxiliary inversion will be more likely where the resultant V2 configuration, considered as a whole construction together with the nature of the fronted constituent, can maintain semantic or pragmatic properties from the L1 which are not possible in English. This, however, leaves a certain proportion of occurrences of SAI-V2 transfer without a straightforward explanation, see representative examples in (10.30).

- (10.30) a. And secondly, **can the government** effectively use television to control and influence the public opinion. (ICLE-DU)
b. This excellent example of this principle, **can we find** whenever two countries or nations went to war. (ICLE-DU)
c. Therefore **should TV commercials be banned**. (ICLE-GE)
d. Here **is birth given** to the word "one" ("man" in German, "on" in French) which replaces individuality by generalization. (ICLE-GE)
e. Accepting further trade liberalisation would mean to give up preferential access to some developed markets, **additionally would it increase** relative prices for them, being a net importer of food commodities. (WUCLE)

In these cases there seems to be no overt indications of emphatic pragmatics and the fronted constituents do not 'need' a V2 configuration to establish any particular semantic or pragmatic relationships. We are forced either to concede that V2 is just truly an unconstrained optional variant in these cases or to claim that the very fact that the V2 construction has been employed here indicates that there must be some special pragmatic force. This line of reasoning is in danger of falling into circularity as it claims

that SAI-V2 is both explanandum and explanans. Given that the blended SAI-V2 construction is connected to special pragmatics, for the time being it will be assumed that the very fact that it occurs is evidence of a specific pragmatic property having transferred (see, however, Conclusions, Caveats and Suggestions for Further Research).

10.5.3 Acquiring English V2 Properties

Interrogatives

It's clear from the corpus evidence and from the judgement of task that the learners have target-like knowledge of word order in (most kinds) of English interrogative. Interrogative SAI constructions of the form discussed above are in evidence in the production and judgement data and do not need to be discussed to any further here. A surface pattern-matching approach would predict that it is actually rather straightforward for L1 German-speakers to acquire English interrogative syntax as there is extensive surface correspondence between the two languages Ex. (10.31) and refer to questions with copula *be* in (10.16) above. It is therefore unsurprising that interrogatives are on the whole target-like as the learning task for questions will involve only the acquisition of *do*-support. The results indicated that a problem for all the learner groups was *do*-support in particular and that where there already was a modal or aspectual auxiliary in questions, this was consistently raised to form questions.

(10.31) Was hast du gemacht?

What have you done?

There was a tendency for learners to produce *have*-raising in questions, which depending on register and dialect variation may or may not be viewed as grammatical in English. In addition, there was a marginal tendency for other homophonous thematic equivalents of auxiliary verbs to be inverted in questions. This can be accounted for by the fact that the question construction may still retain a specific lexical link to specific verb forms and falls out naturally from the assumption that matching of surface forms is the learning mechanism at work rather than implicit learning of underlying syntactic structures (10.32).

(10.32) Interrogative →

(Wh)-do/have/modal-Subj-(V_{LEX})

A constructionist, pattern-matching analysis posits that learners will initially establish prototypical question constructions linked to specific lexical items. For example, Eskildsen (2009) shows that the use of *can* as a modal auxiliary in general, and in questions in particular is driven by a specific lexical instantiation, i.e. “I can write”/“Can you write?” Similarly, Myles et al. (1998, 1999) show for L2 French that English speaking learners rely initially on unanalysed chunks which occur frequently as rote-learned chunks and overextend them to inappropriate contexts as in (10.33), where the formula with 2nd person morphology, which is exploited regularly for posing questions to an interlocutor in classroom discussion, is used in a 3rd person context, which was required by the context.

(10.33) Mon petit garçon euh où **habites-tu**?

my little boy [...] where **lives.2PS you**

‘Where does the little boy live?’

Therefore, it can be assumed that in L2 English specific lexical instantiations of questions, most likely involving *do* or *have* as an auxiliary, will be established early in development as prototypical. Where *do* or *have* (or other auxiliaries are questioned as main verbs, the prototypical question construction may therefore give rise to surface structures with inversion around these, i.e. given the link to specific lexical instantiations, *do*, *have*, etc. may simply be inserted into the construction schema in the inverted pattern without the addition of an additional auxiliary form. The fact that these patterns recur across the all the learner corpora is explained therefore as an effect of generalising across the surface structure of the input.

The fact that inversion occurs in embedded interrogatives in ICLE-BU, ICLE-FI, ICLE-FR and ICLE-GE has the same explanation as proposed for embedded SAI by Bley-Vroman (1997). The prototypical interrogative construction is applied to all instances of questions and therefore gives rise to inversion also in embedded contexts. Given the rarity of embedded questions in the corpus data, and the fact that they usually have SAI (71%, n=5 of 7) it may even be the case that the majority of learners only have the

prototypical interrogative construction and apply SAI across the board. Bley-Vroman bases his analysis on noticing and suggests that it will be difficult for learners to notice that SAI is not a requirement in embedded questions. This would be unsurprising as the structure is rare in the input and so is marginal in terms of overall establishing of interrogative constructions.

Negative Inversion

Goldberg (2006: Ch 8) and Goldberg & Del Giudice (2005) suggest all subject-auxiliary inversion structures (interrogatives, negative inversion, exclamatives, comparatives, etc.) form a naturally coherent functional category connected to the illocutionary force of a proposition. This is contra assertions that SAI in English is a prime example of a purely formal generalisation (see Borsley & Newmeyer 2009 for criticism of the Goldberg view). It is clear from an L2 point of view that SAI does not form a natural category for the learners to the extent that they do not put in place all SAI constructions at the same time and word order in NI remains much more variable than in questions. It can be assumed that the learners have established a target-like schema for declarative clauses with a fronted constituent (10.34), but that this is applied to sentences with fronted negative operators.

(10.34) Declarative → XP-Subj-V-Obj

There is little differentiation, especially for V2-L1 learners, between fronted negative constituents and other fronted XPs, with the result that fronted negative operators are subsumed under the prototypical schema for non-subject initial declaratives. The more precise pattern of variability arises because for those who have NI, it seems to be associated on the whole with overt negation while restrictive XPs are more likely to be treated as a ‘normal’ fronted constituent (10.35).

(10.35) Negative Inversion → XP_{NEG}-Aux-Subj-V

Again, the usage-based pattern-matching approach, which assumes frequency and prototypicality effects, can explain why this should be the case. It would be expected that NI would initially be deployed as a formulaic pattern linked to specific lexical

items. So overt negation with *not* or some other overt negator will be established most readily in the grammar and will only progressively become a more abstract utterance schema. The learners thus appear to be at a stage where there is evidence of formulaic knowledge giving way to a more abstract schema where restrictive elements are also associated with the initial XP which can give rise to inversion. In addition, conscious reflection on word order ‘rules’ might be playing a role in explaining the difficulties which V2-L1 speakers in particular have in acquiring NI in English (see discussion of Competing Systems Hypothesis in Ch. 8).

Stylistic Inversion

The patterning of SI provides evidence in favour of formulaic pattern learning in addition to more abstract utterance schemas. This is the case not only in the learners’ production, but even more so in the natives’ writing. It seems that the natives’ deploy a particular lexically conditioned utterance schema as in (10.36). 56% of all full verb inversion structures in LOCNESS are of the form in (10.36a).

- (10.36) Linking (Presentative) Construction → a. *With X-comes-NP_{Subj}*
 → b. *PP_{Complement}-V_{Unacc}-NP_{Subj}*

This raises the prospect that stylistic or locative inversion may be best analysed as a peripheral, learned construction even in native English rather than as the product of underlying grammatical principles. The discourse-linking phenomenon could plausibly be extended from the sort of prototypical schema in (10.36a) to a more abstract construction where different types of initial constituents and lexical verbs may be inserted into the schema. The pragmatic constraints on the type of verb which are felicitous in the construction are also captured as they can only serve to point to the existence or present the referent of the subject (Levin & Rappaport-Hovav 1995). There is also a range of inversion constructions which appear to maintain a specific lexical link for which generative analyses may even posit something like viral constructions linked to archaic or literary registers (see 10.37). It seems that the learners retain links to a specific lexical construction not only in these instances but also in the wider range of full verb inversion structures; in four of the six learner groups in ICLE, *come* occurs as the verb in a significant proportion of SI tokens (BU 61%, DU 44%, GE 38%, WUCLE

50%). It is possible given the rarity and markedness of the structure in the input that learners may never generalise to an abstract “stylistic inversion construction” but rely on formulaic exceptions to canonical word order in these instances.

- (10.37) a. **Hence ensues** all the trouble for everyone... (ICLE-BU)
b. **Hence follows** the question... (ICLE-BU)
c. **Thus began** the condemnation of witches by the church. (ICLE-DU)
d. **Thus began** the campaign to educate the public... (LOCNESS)

For structures such as these, an analysis in terms of frozen idiomatic expression both for the learners and in the native grammar of English is preferable to assuming they are instantiations of a more general schema. For example, even replacing *thus began* with *thus started* renders the construction somewhat awkward, illustrating the idiomatic link to a specific lexical choice. Green & Morgan (1996: 48) point out that after initial *thus* subject-auxiliary inversion is also an option in English. This may suggest that *thus* remains a specific lexical exception to the English word order rules.

The variability with SI in the learner data is expected if inversion around lexical verbs is due to utterance schemas, which may be at different stages of abstraction, alongside specific frozen formulaic expressions. There is evidence that the learners might overextend schemas where it would not be target-like, giving rise to syntactically possible but pragmatically awkward productions where an inappropriate constituent has been inserted either into the fronted XP or subject slot in the construction (10.38).

- (10.38) a. And here comes the other side – alienation. (ICLE-BU)
b. Here come I. (ICLE-GE)
c. ... where also lies the danger of soon having a president who's too old... (ICLE-FI)
d. But it is exactly in the words 'ask no more' that lies the danger of television society. (ICLE-DU)

It would seem that the variety of different verb-subject structures which may be subsumed under stylistic inversion could be the result of the interaction of different schemas, not only in learner language but also in native English. This calls out for

further research, especially the role of inversion constructions in native English. For the learners there is some evidence of abstraction to inversion utterance schemas, but a number of inversion structures appear to remain (and might plausibly always remain) frozen formulaic expressions. For the V2-L1 speakers the fact that these inversion structures remain linked to specific lexical instantiations explains why there is no overextension to $XP-V_{\text{THEMATIC}}-S$ in the L1 as they are analysed as exceptional idioms rather than as a grammatical property of English which may be matched to the German surface pattern.

10.5.4 Other Non-Target Constructions

Constructions and pattern-matching can account for the occurrence of the other non-target structures produced by the learners. The instances where the thematic equivalents of auxiliary verbs occur to the left of sentential negation are subject to the same analysis as the parallel phenomenon in questions. The other instances of non-target placement of negation are straightforwardly analysed as problems with establishing appropriate scope relations (10.39).

- (10.39) a. But these reasons go [not to the heart of the matter.]
b. He seems [not the only one to have recognised this.]

English in fact permits various scopal relations with negation (10.40).

- (10.40) I have written not a single word today.

It is debatable whether or not examples such as this are available to any relevant extent in the input learners receive. However, it is not crucial to the argumentation as it need not be claimed that patterns like this are the source of non-target placement of negation. Rather, for L1 German speaker the surface distribution of *not* and its scope properties may be associated with the equivalent German negators *nicht* or *kein* and thus can take narrow scope over specific phrasal constituents.

The problematic adverb data can be captured straightforwardly by a constructionist, pattern-matching approach. Proponents of parameter resetting have even ventured that pattern-matching may be at work in the production/acceptance of VAO in English by speakers of a verb-movement L1, even though they also contend that this is a specific learner strategy connected to teaching and the experimental tasks in L2 studies which does not impinge on the underlying L2 competence (Schwartz & Gubala-Ryzak 1992: 4). There is evidence in the surface string in English that adverbs may appear directly to right of thematic verbs. While adverbs do not intervene between transitive verbs and their objects, intransitive verbs may precede adverbs. This is embedded in the wider context where adverb placement in general is variable and subject to a range of semantic and discourse constraints. Thus the learners may assume that adverbs can in fact surface in any number of linear positions as in (10.41). The lack of correspondence between VAO and other diagnostics for the transfer of verb movement is therefore predicted as it is not assumed that these are all the result of a unitary underlying parameter but rather that adverbs are each acquired as a separate construction.

(10.41) (Adv)-Subj-(Adv)-(Aux)-(Adv)-V-(Adv)-Obj-(Adv)

A further advantage of assuming a pattern-matching learning mechanism is that it allows us to propose that transfer may still also play a role in the production of VAO sequences, although again it must be acknowledged that this descriptive power of a constructionist approach must be extended and tested by further studies. It is problematic to assume an underlying parametric representation which allows thematic verb movement as there is no evidence apart from VAO which would suggest that this is the case. However, constructionism can accommodate transfer as there is no motivation to assume that VAO should be connected to other diagnostics for verb movement. It is therefore possible that VAO patterns may transfer from the L1 while other surface sequences connected to verb movement do not. VAO sequences in learner data may therefore be due to a combination of variable, interface constrained input together with the influence of the L1. Where the input is more determinate, as with sentential negation, this allows learners to converge on the target properties and so obviates any motivation to fall back on the L1 as a source of knowledge, hence the lack of any L1 transfer effects with negation.

10.6 Acquisition, Teaching and Learning

The final point to be made in connection to the constructionist viewpoint is that it accommodates the role of formal foreign language instruction in the most satisfactory way. While the precise role of formal instruction and its interaction with possible implicit learning remains unclear, it is surely uncontroversial that there *is* such an interaction and this has been exploited in the argumentation in Chs. 8 and 9. This has not, however, been accepted by all second language acquisition researchers. Krashen's (1981, 1985) distinction between *learning* and *acquisition*, where only acquisition can be understood as true acquisition separate and distinct from metalinguistic knowledge, proves a recurrent theme in generative SLA, where it is implicitly or explicitly assumed that L2A develops in the way that it does for each individual learner regardless (or in spite of) of the effects of formal foreign language instruction (see for example Schwartz 1993, Schwartz & Gubala-Ryzak 1992). It would appear, however, that the quantitative effect of instruction is generally acknowledged, as Toth (2000: 175) points out "the assertion that explicit rules and classroom practise accelerate the rate of acquisition and raise the level of ultimate attainment is relatively uncontroversial."

As we have seen, however, there must also be a qualitative role for instruction and formal input in terms of the nature of the L2 grammar constructed by a learner. Rothman's (2008) Competing Systems Hypothesis shows that instruction seems to have a qualitative (albeit in this case perhaps detrimental effect) but it is typical that he formulates the hypothesis in such away that the explicit knowledge system remains separate from, and may interfere with, the implicit, generative system. Thus taught knowledge remains somehow distinct from the 'true' acquisition process. However, the fact is that these rules are an integral part of instructed foreign language learners' knowledge of their L2. Toth (2000) shows that instruction, and type of instruction, plays a significant role in the acquisition of L2 morphosyntax. Based on the acquisition of knowledge of the function of the Spanish verbal clitic *se* by L1 English learners of Spanish, he shows that form and meaning-focussed instruction seemed to have a sustained effect on the learners' knowledge of the morpheme's distribution and semantic consequences in Spanish. It appears that this helps learners notice (in the

technical sense) the relevant linguistic facts, while they may not notice certain L2 properties through exposure to input alone.

This would therefore seem to suggest that foreign language instruction has an important role in the development of L2 grammatical competence. This is a fact which a constructionist approach is well-equipped to accommodate. In the absence of implicit, UG-based acquisition and parameter resetting, learners must resort to alternative learning strategies, including consciously learned and applied formal rules. Herschensohn (2000: 200) notes that a constructionist approach assumes that “L2ers use a coalition of techniques (which may include instruction and error correction) to build the interlanguage grammar and that they pass through an intermediate period during which they show variability.” Note that this coalition of factors will also include UG constraints, L1 transfer and general learning strategies (Herschensohn 2000: 205).

Once the role of foreign language instruction is permitted qualitative influence on the form of the L2 grammar, the importance of specific linguistic constructions becomes apparent. Myles et al (1999: 76) point to the importance of formulaic chunks⁵⁴ at the early stages of classroom-based L2A as “instructed learners spend considerable time memorizing and rehearsing complex chunks.” It is therefore unsurprising that they find that learners tend to overextend these formulaic chunks, producing ungrammatical utterances in context, e.g. French questions. Myles et al (1998, 1999) demonstrate that learners at more advanced stages appear to unpick these chunks and use them as the basis for creative grammar construction. This may also be interpreted as the process of abstracting from specific lexically-restricted formulaic sequences to utterance schemas. They admit, however, that “an utterance may continue (and co-exist) as a formulaic unit even after it has apparently been analysed into its constituent parts” (Myles et al 1998: 328). Thus, even at more advanced stages, specific formulaic units might persist even after there appears to be evidence of more abstract grammatical knowledge. We have seen that this is the case with locative and stylistic inversion structures in the learners’ production.

⁵⁴ It should be noted that Myles et al refer only to “chunks”, “formulaic units” etc and not to constructions. Similarly, their approach is not constructionist in the sense outlined here.

In sum then, given a model of L2A which is guided at most only loosely by UG as a constraint on the form of a grammar but not as an implicit parameter (re)setting process, it is unsurprising that L2 grammatical knowledge may be derived directly from classroom-based instruction and thus reflect constructionist or formulaic knowledge to a significant degree.

10.7 Conclusions, Caveats and Suggestions for Further Research

There is residual evidence of transfer of V2 with auxiliary inversion, inversion of copula *be* and inversion of the arguments of equative thematic verbs. There is no evidence of continued thematic verb movement given the proposed analysis of VAO orders and given the analysis of equative verb inversion outlined above. This reinforces an interface approach to V2 transfer as it implies that the narrow syntactic properties of thematic verb movement are acquired more completely than V2, which is connected to discourse-pragmatics and illocutionary force. However, there is a lack of clustering of parameter resetting, which one would expect under the assumption that implicit acquisition of underlying parametric options is at work in the course of L2A. I have suggested that these patterns are not due to the transfer of an underlying V2 constraint but rather to constructionist learning based on surface generalisations and that transfer affects also whole surface patterns which seem to transfer from L1 German. Thus, while the interface approach has predictive power, it seems that interface *constructions* pose a problem for advanced L2 learners. A further finding is therefore that discourse-pragmatic properties seems to continue to transfer from the L1 after syntax has been acquired. The residual optionality of the various surface V2 constructions falls out naturally from the assumption that different surface constructions interact in the L2 rather than expecting the various surface consequences of an underlying V2 parametric option to follow from triggered resetting.

There is evidence that surface patterns show prototypicality effects and are restricted to specific lexical instantiations of certain constructions. For example, it seems that the equative inversion structures occur only with third person pronominals and full NPs in interrogatives, or with full NPs in declaratives. Further research could test this constructionist prediction, the assumption being that the sentences in (10.42) will be

accepted/produced more readily than those in (10.43). (10.43b) will likely be more readily rejected as pronominals in English provide case marking which can be used as an overt criterion to establish grammaticality. However, no matter what strategy learners may employ, if there is a distinction in acceptability, it is clear that both sets of sentences are not subject to the same implicit underlying structural analysis but rather due to surface patterns, which would support a constructionist approach.

- (10.42) a. What means that?
b. An example provides the German band die Ärzte. (WUCLE)

- (10.43) a. What mean you?
b. It provides they.

The fact that V2 transfer is in evidence only with inversion supports an interface approach to advanced proficiency levels in L2A. Non-target inversion structures often follow fronting of constituents that would be licit in clause-initial position for emphasis in German (and Dutch) but not in English, which provides grounds to assume that the locus of the problem is information structure rather than syntax per se. V2 patterns transfer to maintain L1 information structural patterns. This might be particularly relevant if learners do not have the means to indicate information structural distinctions in the L2 and where this is the case, they fall back on the L1 option. As Becker (1983: 218, quoted in Ellis 2003: 69) states, “suppose that, instead of shaping discourse according to rules, one really pulls old language from memory (particularly old language, with all its words and everything) and reshapes it to the current context.” The constructionist approach predicts that this is the sort of mechanism underlying L2 *knowledge* and not just production strategies. If this analysis is on the right lines it also explains the why there is a tendency to produce non-target auxiliary inversion but this is rejected in a target-like way in grammaticality judgement task. If information structural patterns motivate the transfer of surface V2, the fact that the grammaticality judgement task tested sentences in isolation might mean that lack of a wider context leads the learners to reject these instances as pragmatically unjustified violations of surface word order.

However, as already alluded to, this line of reasoning leads to a certain amount of circularity as there are instances of surface V2 which cannot be said to be motivated directly by the nature of the fronted constituent having transferred from the L1. For example, in (10.44) there is no apparent motivation for V2 in terms of the fronted constituent having some special information structural status or emphasis.

- (10.44) a. Therefore should TV commercials be banned. (ICLE-GE)
b. Here is birth given to the word "one" ... (ICLE-GE)

If the proposal that V2 must be connected to a special pragmatic force associated with the fronted constituent, it would be predicted that when this sort of V2 structure is produced in speech there will be a phonological correlate of some specific emphasis. This could be tested by eliciting non-target V2 structures in speech to investigate whether or not there is in fact such a correlation between intonation and V2.

A further caveat is in order on the use of written production data. It is possible that this might bias learners towards production of learned formulaic units, which might not be in evidence to the same extent in spontaneous spoken discourse. However, if a constructionist approach to L2A is on the right lines, frequency and prototypicality effects should also be present in more spontaneous production modes. Indeed, as Myles et al (1998, 1999) have shown, in spoken L2 production there is extensive reliance on learned formulaic schemas which learners overextend to contexts where they are not appropriate. This also raises the question of the role of instruction and explicit knowledge of grammatical rules. Myles et al show that the constructionist structures their learners employ are those which tend to be taught as specific formulaic utterances to facilitate interactional exchanges typical of classroom practise.

The basic assumption of a Fundamental Difference approach is that L2 learners must resort to general problem solving strategies in the learning of the L2 and that this is distinct. It has long been acknowledged that this general problem solving strategies may interfere with implicit linguistic acquisition (e.g. Felix 1985 on Competing Cognitive Systems). This has been developed to suggest that the role of explicit knowledge of grammar and instruction might be detrimental to the acquisition of ultimate target-like

knowledge of the L2. For example, Rothman (2008) shows that the application of taught rules seems to prevent learners of L2 Spanish acquiring target-like knowledge of aspectual distinctions while naturalistic learners have target like knowledge. Two points should be made with respect to this type of model. Firstly, the application of taught 'rules' seems to be at play to a certain extent in the data in so far as V3 is applied quite rigidly by V2-L1 speakers, preventing them from showing target production of negative inversion. However, it is not clear what wider application this sort of mechanism has on the data as ungrammatical V2 persists and therefore clearly evades this conscious filter, which would in the case of auxiliary inversion actually give rise to grammatical utterances.

One could also raise a more conceptual issue with respect to proposed competition between an implicit language learning module and general problem-solving skills/taught rules. It is not clear why one should characterise this in terms of competition other than to maintain the theoretical position that language learning must be implicit and that the problem with L2A is that other factors in some sense 'interfere' with this mechanism. Rather than viewing it as interference, it would be more realistic to admit a place for meta-linguistic knowledge and conscious rules of grammar as integral to the process of acquiring a second language as an adult given the fact that the implicit system is no longer available to the same extent as in L1A. This is, of course, the essence of the constructionist argument. It is only to be expected that there might be differences in the course of acquisition between instructed and naturalistic learners, but even naturalistic learners will surely make use of general problem-solving abilities. Herschensohn (2000: 205) sums this up when she says that "[t]he constructionist approach [...] claims that L2A is accomplished through a coalition of strategies that include L1 transfer, UG and cognitive strategies."

Therefore, we can claim with Chomsky (1997: 128) that "[l]ike other kinds of growth, language acquisition happens easily at a certain age, but not later. There comes a time when the system doesn't work any more." The evidence suggests that this is in fact the case and the implicit functioning of a language-specific learning mechanism which is available to children for their L1 is no longer available for adult L2 learners. L2 learners thus access UG through their L1 giving rise to transfer of the L1 grammar which is

replaced only piecemeal by L2 constructions. The interplay of different constructions and utterance schemas together with explicit declarative lexical knowledge of the L2 give rise to optionality and continued transfer effects even at advanced levels of proficiency.

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Appendix 1: Sentences in WU Judgement Task

	Grammatical	Ungrammatical		
		V2 Lexical Movement	V2 Auxiliary Movement	Other
<i>Inversion</i>	<p>Recently the stock market has performed badly.</p> <p>The job cuts were difficult but they were necessary.</p> <p>In 1995 Austria became a member of the EU.</p> <p>I am sure about the price - 1000€ we offered.</p> <p>Owing to more efficient production, the manufacturer increased its profits.</p> <p>Out of the meetings emerged a new agreement on salaries.</p>	<p>Last year rose the number of unemployed in Europe.</p> <p>An example of innovation offers the service sector.</p> <p>There were no profits in 2007 and as a result fell the share price.</p>	<p>Generally do I expect economic conditions to improve.</p> <p>The campaign has been successful but unfortunately has it cost too much.</p> <p>Start-up capital is hard to find but important is it nonetheless.</p> <p>The managing director congratulated his team, and especially the marketing manager did he praise.</p> <p>Because of problems with delivery have we cancelled the contract.</p> <p>At the moment is the company expanding quickly.</p>	
<i>Questions</i>	<p>Where did the meeting take place?</p> <p>What do you think of the proposal?</p> <p>Should I accept</p>	<p>When begins the meeting with the clients?</p> <p>What implies the new tax law for our company?</p> <p>Approved our</p>		

	this job offer?	shareholders the plan?		
<i>Negative Inversion</i>	Only at the last minute did we succeed in the negotiations. Never have I been so busy.	Under no circumstances accept we the terms of this contract.		Never I expected such a positive result.
<i>Negation</i>	The union representative didn't expect the negotiations to be so tough. I haven't prepared my presentation.	We have not problems with the new computer program. We accepted not the conclusions of the survey.		
<i>Adverbs</i>	It is always important to have a clear idea of your goals before a meeting. Branches which regularly lose money will be closed. Our plan would initially cost a lot. When there is a lot of pressure, I can work effectively. Businesses should greatly reduce their impact on the environment. They organised	The internet changed greatly the way that business is done. Austrian businesses have usually interests in Eastern Europe. Some people send always complaints about the level of service. We buy regularly office supplies online. I read often the Wall Street Journal.		It is necessary to give always accurate information to clients. After some problems the new computer system is effectively working. Last year the management changed often their marketing strategy. Our company awards contracts always to the lowest bidder. In the internet business quickly things can change.

	<p>the whole conference very quickly.</p> <p>It would probably be wise to test our proposals before presenting them.</p> <p>Shares are usually the best long-term investment.</p> <p>The share price today is worse than it was yesterday.</p> <p>The economy is growing slowly.</p> <p>Our profits rose slightly last year.</p> <p>He always leaves the office at 5pm.</p>			<p>Reading carefully the details of a contract is always important.</p> <p>I don't know the phone number so I will have to look it again up.</p> <p>Unfortunately we accept never credit cards.</p>
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Appendix 2: Instructions for Participants in GJT

In the last page of this survey you will find a list of English sentences. Your task is to rate how GRAMMATICALLY acceptable you find each of the sentences on the scale "Very Good, Good, Don't Know, Bad, Very Bad". The sentences contain vocabulary which is typical of the sort of "Business English" that students of English for special purposes are exposed to. Do NOT base your judgements on the choice of words or whether the statements are factually accurate. If you really can't make a decision about how good or bad a sentence is, choose "Don't Know" but try to avoid this and give a rating one way or the other as much as possible. There are no right or wrong answers, the point is to find out what you find acceptable. Don't think too long about any single sentence, your first impression of the sentences' acceptability is a valid answer. After you have rated all the sentences click "Done", you don't need to read through or check your choices.

Sie werden eine Liste verschiedener Sätze in englischer Sprache sehen. Einige werden Ihnen grammatikalisch akzeptabel vorkommen und einige nicht. Ihre Aufgabe ist es, jeden Satz nach dem gegebenen Schema „Very Good, Good, Don't Know, Bad, Very Bad“ zu beurteilen. Es gibt keine „richtigen“ Antworten im Sinne von im Englischunterricht erlernten Regeln. Was Ihnen als richtig oder falsch vorkommt ist eine gültige Antwort. Wir interessieren uns für Ihren ersten Eindruck, bitte versuchen Sie daher, die Aufgabe schnell zu erledigen und denken Sie nicht lang über jeden Satz nach. Wenn Sie wirklich keine Entscheidung treffen können, ob ein Satz gut oder schlecht ist, wählen Sie „Don't Know“ aber versuchen Sie dies möglichst zu vermeiden. Nachdem Sie alle Sätze bewertet haben, klicken Sie auf „Done“, lesen Sie die Sätze NICHT noch mal durch und ändern Sie keine Antworten.

Appendix 3: Sentences in Equative Verb Juggement Task

Be

- UNGV2: 1. Important are the contents of the textbook.
2. Often are students unsure about exam material.

- UNGV3: 3. On the table a large book is.
4. In class a lot of students are.

- GRV2: 5. On the board are the answers.
6. In the lecture hall is an old professor.

Intrans

- UNGAdvV2: 7. At the end of the semester take place the exams.
8. Outside the library occur most discussions.
UNGWhV2 9. When appear the exam results?

Equate

- UNGArgV2: 9. The most important point indicates the conclusion.
10. The results of the study show the graphs.
UNGWhV2: 11. What implies the new study programme for students?

Thematic

- UNGAdvV2: 13. At the end of class gave the professor a summary.
14. Outside the institute wrote the students their essay.
UNGArgV2: 15. The book read the students during the holidays.
16. At the last minute finished the students their presentation.
UNGWhV2: 17. What wrote the professor on the board?
18. When spent the student a year abroad?

Grammatical

- GrAdvV3: 19. In the lecture the teacher provided information about exams.
20. Under the desk you should store your books.
GrArgV3: 21. The linguistics professor, I really like.
22. The literature lecture, I find boring.
WhV2: 23. What did the lecturer just say?
24. When do the exams begin?

Distractors:

- The exams are in June are usually very difficult.
In the summer holidays I will go to a language school.
My courses next semester will be difficult.
I have been learning English for 5 years.

All students are studying hard at the moment.
My English has improved since the start of the semester.
The students were surprised by their results.
The professor places importance on a good accent.
I start a new part-time job in summer.
I prepare thoroughly for all exams.
Taking detailed notes in class is important.
Students should not use laptops in class.
Teachers should provide more feedback.
The librarian offered help to new students.
Some students give Nachhilfe to school pupils.
Class should not start before 9am.

CV

Tom Rankin was born in Belfast, Northern Ireland in 1979. After completing secondary education at Wellington College Belfast, he studied French and German Studies at Queen's University Belfast from 1998 to 2002. This included a year spent studying German and General Linguistics at the University of Heidelberg, Germany. He completed a Master's Degree in Linguistics at the University of Leeds, England in 2005. Between 2006 and 2010 he worked as a Teaching and Research Assistant at the Vienna University of Economics and Business. During the same period he carried out research for a Doctoral Thesis on Second Language Acquisition at the Department of English and American Studies at the University of Vienna.